

Natural Life

Designing A Solar Greenhouse

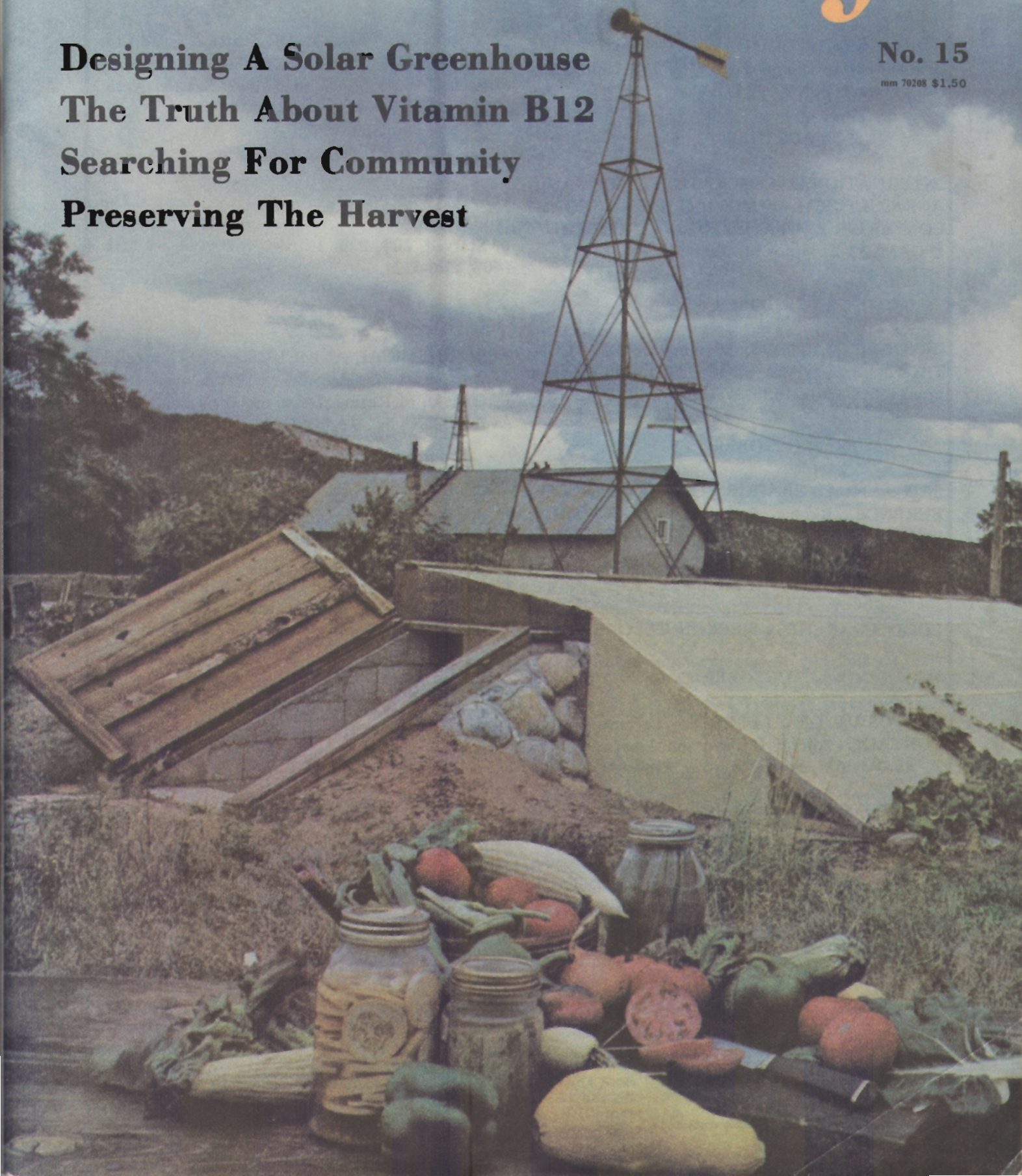
The Truth About Vitamin B12

Searching For Community

Preserving The Harvest

No. 15

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Natural Life Calendar

SEPTEMBER 21

WORLD GRATITUDE DAY – CONTACT: World Gratitude Day Foundation, Inc., 777 United Nations Plaza, NY, NY 10017

OCTOBER 2 - 5

INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURAL MOVEMENTS (IFOAM) CONFERENCE, Montreal, Quebec CONTACT: IFOAM, 33 E. Minor St., Emmaus, PA, 18049

OCTOBER 6 - 8

CRITICAL MASS '78, Washington D.C. CONTACT: Citizen's Movement for Safe and Efficient Energy, P.O. Box 1538, Washington, D.C., 20013

OCTOBER 7 - 9

3RD ANNUAL PRAIRIE FOOD CO-OPS CONFERENCE, Regina Saskatchewan, CONTACT: Wilfred Allan, 2216 Smith St., Regina, Sask.

OCTOBER 15 - 22

FOOD AWARENESS WEEK IN CALGARY, Alta.

OCTOBER 21

SYMPOSIUM ON ALLERGIES, Toronto Ontario CONTACT: Allergy Information Association Rm. 7, 25 Poynter Drive, Weston, Ont., M9R 1K8

OCTOBER 13 - 15

FALL CONVENTION, Healthy Horizons Assoc., Fort Qu'Appelle, Saskatchewan, CONTACT: Healthy Horizons Assoc., 166 Franklin Dr., Yorkton, Sask.



International Year
of the Child 1979

L'Année Internationale
de l'Enfant 1979

OCTOBER 13 - 15

ENVIRONMENTAL FAIRE, Seattle Centre Coliseum, Seattle, Washington CONTACT: The Environmental Faire, 909 4th Ave., Seattle Wash., 98104

OCTOBER 20 - 21

FOOD AWARENESS EXPOSITION, Central United Church, Calgary, Alberta CONTACT: Stuffed or Starved, 204, 223 12 Ave., S.W., Calgary Alta., (403) 266-6121

OCTOBER 30 - 31

ZERO-CHEMICAL AGRICULTURE, Echo Valley Centre, Fort Qu'Appelle Saskatchewan CONTACT: U. of Regina, Dept. of Extension, College Ave. & Scarth St., Regina, Sask.

NOVEMBER 2 - 4

INTEGRATED MANAGEMENT OF RESOURCES CONFERENCE, Bayshore Hotel, Vancouver B.C. CONTACT: Centre for Continuing Education, Univ. of B.C., Vancouver, B.C., V6T 1W5

NOVEMBER 3 - 5

THE ENERGY LIFESTYLE SHOW, International Centre, Toronto Ont. CONTACT: The Energy Lifestyle Show, 3 Church St., Suite 603. Toronto Ont., M5E 1M2 (416) 496-0551

NOVEMBER 7-9

PERSPECTIVES ON NATURAL RESOURCES – SYMPOSIUM II – LAND, Sir Sanford Fleming College, Lindsay Ontario. CONTACT: Sir Sanford Fleming College, Box 8000, Lindsay, Ont. K9V SE6

JANUARY 28 - 29/79

TOTAL HEALTH '79, Royal York Hotel, Toronto Ont. CONTACT: Consumer Health Organization, 108 Willowdale Ave., Willowdale, Ont., M2N 4X9 (416) 222-3083

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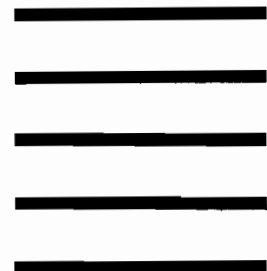
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Natural Life

Access to Self-Reliant Living

Natural Life Issue Number 15, September-October, 1978

EDITOR Wendy Priesnitz
PUBLISHER Rolf Priesnitz

ADDRESS CORRESPONDENCE TO:
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COVER PHOTO by James DeKorne for the cover of his book *Survival Greenhouse* published by Peace Press, 3828 Willat Ave., Culver City, CA. The greenhouse is at the Walden Foundation in El Rito, N.M., where Jim lives with his wife and family. This is the first eco-system greenhouse ever built; it contains a hydroponic gardening system, aquaculture tanks, rabbit breeding cages and traditional greenhouse equipment.

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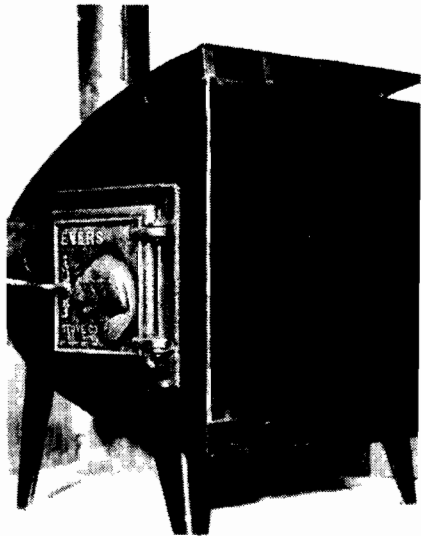
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ACCESS TO TOOLS FOR RATIONAL LIVING

The Independence Wood Stove was originally designed by Larry Gay, author of *The Complete Book of Heating With Wood*. This rugged and functional steel stove is being manufactured by Camaird Products Ltd., a small family enterprise in rural New Brunswick. The company has been selling the stove in the maritimes and is seeking dealers in other provinces. A new down-draft principle stove is in the works as is a larger version of the Independence.

CONTACT

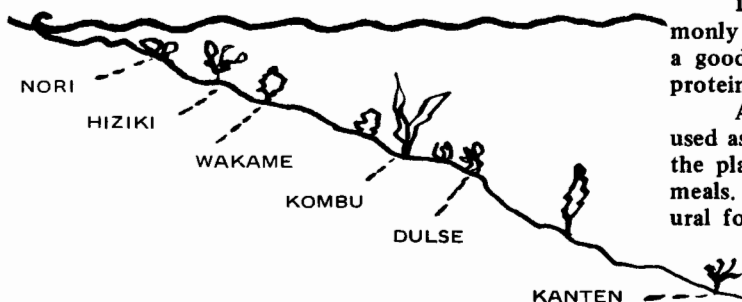
Camaird Products Ltd.
Box 436
Hampton, N.B. EOG 1Z0



Of the current rash of new wood stoves hitting the market these days, one stands out purely because of its innovative and fresh design. The Evers, cast iron wood stove, designed, produced and marketed by another family business, has a not unpleasant curved shape with a large curved baffle plate which forces the unburned gasses through the fire zone which theoretically produces much more heat per log. It's worth having a look at.

CONTACT

EVERS STOVE COMPANY
Box 1, Group F, RR 3
Mount Hope, Ont., LOR 1W0



Dulse is a sea vegetable (or "weed" as it's more commonly known!) that is being harvested off Nova Scotia. It is a good source of vitamins, minerals, trace elements, and protein.

Atlantic mariculture's dulse flakes and powder can be used as a mild herb in imparting flavour to many recipes, or the plant can be eaten cooked as a vegetable addition to meals. These products are available in many health and natural food stores. For nutritional information and recipes.

CONTACT

Atlantic Mariculture Ltd.
Box 2368
Dartmouth, Nova Scotia B2W 3E0

We'll only print your full address if you ask us to. If no address appears with a letter, please share your answer with us all, through Lifeline. In fact, ALL questions, answers, and comments should be addressed to this Lifeline forum. Because of the extremely large volume of mail, please do not expect a reply to a question other than through the pages of this magazine.



Natural Lifeline is designed to provide a forum for the interchange of ideas and information among readers of Natural Life. If you have information or comments, please write: Natural Lifeline, Box 640, Jarvis, Ontario.

NATURAL LIFELINE

Dear People at Natural Life;

We ran across a copy of your magazine and thought it was fantastic. Seemed to have much more real information in it than a lot of alternate magazines.

We are trying (as are several of our friends) to figure out how to get rock phosphate for application on our farms—seems difficult to ferret out the mechanics of getting ahold of it. If you are aware of anywhere, please pass the information along. Likewise, if we uncover some we'll pass it along. Thanks a lot.

yours truly
Kevin Murphy
Norton, New Brunswick

Eaton Valley Ag. Services, C.P. 25, Sawyerville, P.Q., JOB 3A0 sell rock phosphate for farms, as well as a lot of other hard to find, useful things along the same lines. NL

Dear Natural Life;

I have made soap by your recipe but I would like to use natural dyes and perfumes. Does anyone know what flowers can be used which won't colour the skin or natural flower scents which will last in the soap.

I have enjoyed your magazine and find it interesting and to the point.

yours truly
Mrs. Dianne Stafford
Stratton, Ontario

Dear Sirs;

We, as an "alternative energy" construction company, are looking for any information on where we can get stock solar house plans.

We have looked into Drawing Room Graphics plans (Solplan) and the Nicholson Catalogue.

Do you or your readers know of any other sources for stock house plans

in Canada or the U.S.? Thank you for your assistance.

yours sincerely
Nigel Seale
Sherlock Homes Construction
Victoria, B.C.

Dear Natural Life;

Thanks for a fine magazine, enjoyable and educational. Enclosed is an answer to a letter in your number 14 issue from Glenda Zanzow asking about natural fibres for use in making baskets.

Here are names and authors of various books. Each book has a long bibliography with additional information. I have used a sedge grass (slough grass) native to this northern area for braiding and fashioning the coils into very strong, substantial baskets. And I'm sure there are many more native materials that can be used for different types of basketry. I've just started basketry and have very rosy dreams of all the beautiful products I will fashion.

Make A Gathering Basket—August 76, Organic Gardening & Farming Magazine

Basket Making From the Beginning—La Barge

Indian Basket Weaving—Newman

Basketry—Christopher

Natural Basketry—Carol & Don Hart

A Modern Approach to Basketry With Fibres and Grasses—Meilach

Porno Basket Making—Elsie Allen (this booklet has such a delightful philosophy and approach to using nature's gifts in making baskets)

Barbara Currie
Tagish, Yukon

Dear Natural Life;

In reply to a letter from Gus Teerling in Natural Life 14 re potato bugs: The method you suggest of



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sowing beans between the rows, I use too, but I also plant horseradish roots here and there around the potato patch. I have not had potato bugs for the last four years.

I enjoy your enlightening articles very much as I have been an organic gardener for many years.

yours sincerely
Louisa M. Gregoire
Ottawa, Ontario

Dear Natural Life;

Re: Glenda Zanzow's letter asking for information about the art of basketry.

There is an excellent article entitled "Nature's Baskets— from grasses you gather" in the June 1977 edition of *Decorating and Craft Ideas*—published at P.O. Box 2327, Fort Worth, Texas, 76101. If she wrote to the company, perhaps she could purchase that issue.

sincerely
Marjorie Bean
Niagara Falls, Ontario

Dear Natural Life;

Your new writer, Joan O'Reilly, appears to me to be a great asset to your magazine. Her articles on medicinal treatments in issue number 14 are worth their weight in gold to the majority of outdoorsman-like people such as myself.

Being a common poison ivy sufferer, I was immediately interested in what Ms. O'Reilly knows about preventing such uncomfortable and usually, holiday-ruining rashes.

After reading her three sections in your latest issue, I've been prompted to purchase a plant field guide as she suggests to take with me, along with my copy of *Natural Life*, on my next excursion into the wilderness.

With Ms. O'Reilly's knowledge passed on this way, I'm sure there will be no more itchy summer camping trips for me. I hope I never have to use her suggestions, but thank you for the excellent insight. My hat goes off to her and keep up the good work.

sincerely
Warren Daniels
Nepean, Ontario

Dear Natural Life;

Thanks for *Natural Life*; it is good to know we are not alone.

We need and want co-workers! We need people with a New Age outlook and interests in organic gardening and farming, animal husbandry, alternate education and health, photography and filmmaking, graphic arts and printing, arts and crafts, especially educat-

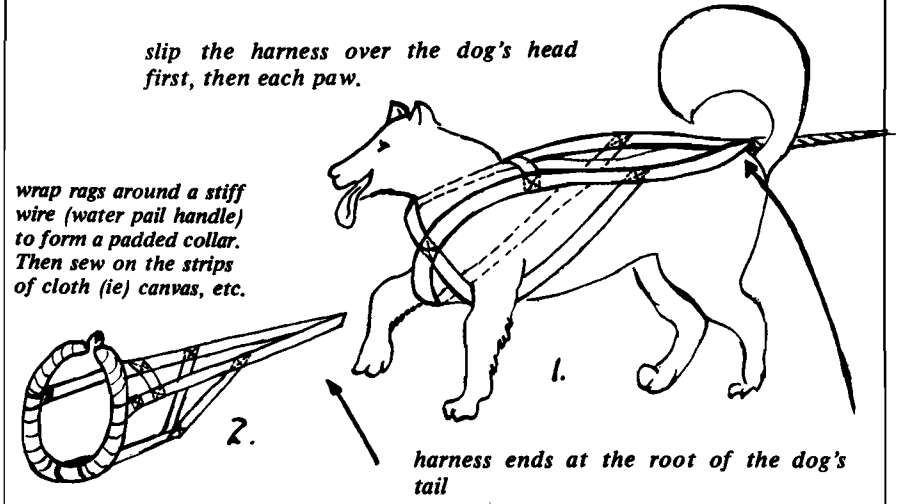
Dear Natural Life;

Here are two types of dog harness designs that I've used with success. Hope this will help the person who recently wrote you asking about this.

Also, if anyone is willing to lend, give or sell numbers 1,4,5, & 6 of *Natural Life*, I would like to hear from them. Kind regards.

PS—A dog can be expected to pull approximately his own weight. So in the case of the letter writer's child and sled, 60 pounds maximum. Never feed the dog before going out—wait till after the run.

L. Kappi
Rankin Inlet
N.W.T., X0C 0G0



ional toys, writing, typing and bookwork, etc., etc. We invite them to write to us at Future Child, Box 1419, Salmon Arm, B.C.

In the spirit of a new age
Horst Bohme
Salmon Arm, B.C.

Dear Natural Lifers;

Something for the Food Editor here! We are not vegetarian, but meat is too much for us sometimes. Ground meat, mixed with semolina or Red River Cereal, or any good cereal is good with spices, herbs, salt, pepper, onions, eggs, milk powder. Then pack them in cottage cheese containers, stack and freeze. It is handy on bread, with vegetables or a salad.

Instead of macaroni or pasta, try vegetables, or cook cream of wheat or cornmeal and pour your spaghetti sauce over. It is a good way to stretch meat and get all the vitamins and variety to keep one's interest in cooking and eating. (The leftovers can make a soup).

Something I never see mentioned in cookbooks, but rhubarb makes good juice. Cook it with lots of water, then strain. Add sugar (or honey), throw away the rhubarb or eat it. You will have to add water to the juice because it is thick when cold. We used to call that drink a Booster—it picks you up when hot and tired. (Good with orange, raisins, also.)

Georgette Giguere
Kemptville, Ontario

Dear Natural Life;

I have found your magazine to be very informative and enjoyable. I have found myself compelled to write in reply to the axe article in issue 14. He states that the broad axe and double-edged axe are oldtimers and seldom used today. I live in the Columbia Valley of B.C. and not considering myself an oldtimer, use the double-edged axe every day.

The two blades are a multi-purpose tool. One blade should remain slightly dull for splitting and the other sharp for cutting or log work. A dull axe will split while a sharp one will cut and result in getting stuck half way through. The extra weight makes splitting easier and quicker. Seldom does it take more than one swing.

As there is an abundance of trees in the area, many people build their own log houses. A large percentage of these are done by hand, using the broad axe. Both axes are available throughout this area in local stores and are a regular store item!

To remove the axe handle: I have found by placing the axe on the top of the wood stove for a few hours it will dry and shrink the handle making removal easy. The blade will be alright unless the stove is blazing or it is left too long. To install a new handle, do the reverse and soak the wood afterwards to expand the wood.

Keep up the good work.

Dean Young
Golden, B.C.

Dear Natural Life;

Had an interesting experience recently, working on an electrical installation in a farm building. The job had to be broken off half-completed, and when I came back to it, there was a dead mouse in a switch box. Apparently it had crawled in through one of the open knockout holes looking for a place to nest, and there it had died, unaware of the lethal charge in some pieces of metal. Really it was my fault for leaving the holes open.

Thinking ahead a thousand years or so, it is easy to see a group of our successors coming along, spears over their shoulders, and clubs in their hands, looking for a snug cave to nest in. They will come to some quite solid looking ruins, crawl in and lie down next to some strange shapes. And there they will die, unaware that the place was once a nuclear power station, and the strange shapes still send out a lethal radiation charge.

What gives us the right to set atomic mousetraps for future generations?

On another track, there is this newfangled stuff called pyrethrum, or diatomaceous earth. Spray it on insects, and they die like—well, like the proverbial flies. And yet, it is not poisonous. It is the fossilized remains of microscopic marine organisms called diatoms. How does it work? One theory is that it damages their breathing tubes, much like splinters of bird bones sticking in dogs' throats. Anyway, it kills 'em without being a poison.

But wait a minute—microscopic slivers of silica. A stable, inert substance, not subject to being dissolved by the body. Isn't that exactly what asbestos is? And wasn't asbestos thought to be harmless for many years?

I am willing to bet all the tea in China to a low-tar cigarette (which I wouldn't smoke anyway) that in the years to come diatomaceous earth will turn out to be a carcinogen.

For my money, let's leave diatomaceous earth where Nature put it—in the earth. We do not have the right to set mousetraps—be they atomic or chemical—for future generations.

Bill Budachs
Toronto, Ontario

Dear Natural Life;

I am looking for a book with plans in it to build bird houses. Could anyone recommend one to me?

Thank you for your help.

yours truly
Frances Gehr
Grand Valley, Ontario



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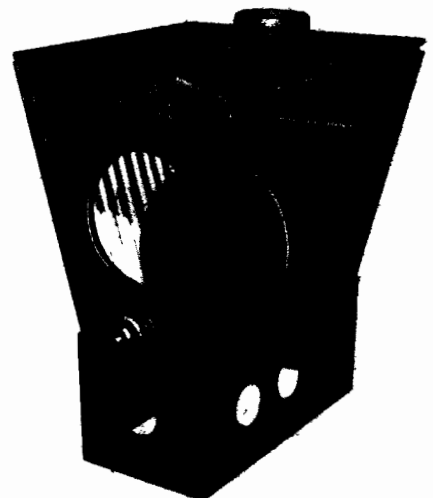
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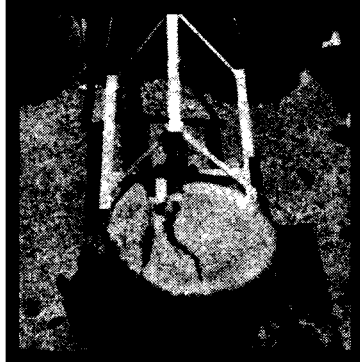
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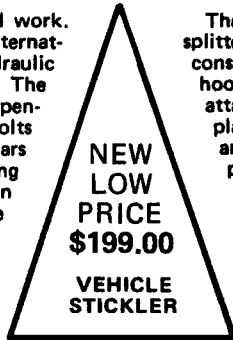
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Mother Earth News September 1976

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Telephone 416 749 1253

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N.L.

Dear Friends;

Congratulations on the Natural Life magazine. We are very satisfied and glad we did subscribe.

We are especially glad for your Lifeline. My fiance and I will be packing it up and moving to Canada, hopefully at the beginning of '79. This has been my own personal dream and goal since I was sixteen years of age and just a trifle too young to get out and go for it.

Now, four years later, I met Robert, a young man who shares the same goals as I. So far in the last four months we have purchased several books like *The Owner-Built Homestead*, *From the Ground Up*, *Homesteaders Handbook*, etc...etc...

We have a van we are in the process of remodelling suitable for some living. We plan to take along a tipi to live in until we get our home established. We are both all for roughing it. We plan to live as naturally and self-sufficiently as possible. We are working hard and striving for our goal because it means a lot to us. We are extremely tired of the city life, tired of all the crimes, murders, drugs, pollution and politics!

We want and need to get out. We feel if we stay it will destroy us and our relationship which I might add is a beautiful one! I myself envy you all who are already situated in this type of life.

We would like to ask your readers if they might have any suggestions or open-minded thoughts that they think might be of interest or useful to us? Such as maybe, certain books to read or certain things to bring along. Anything we might need or want to know before we move up to the beautiful Canada. Also I want to ask: What is the temperature mostly like? What type of weather? What are the people and communities like? Any and all suggestions or thoughts are welcome. We eagerly await your correspondence.

sincerely

Vivian Castorena
4534 Bridgeview
Pico Rivera, California, 90660

Dear Natural Life;

With regard to Maureen Glendinning's letter in issue number 14, the Information Canada Bookstores used to have a pamphlet on the growing and harvesting of wild rice. Near as I can recall, you need water that flows continuously, but slowly and with good soil underneath.

Morrie Schneiderman
Toronto, Ontario

Dear Natural Life;

I was wondering if you could help me. My goat started out with small pimples on her udder. This spread over the whole bag, the inner sides of the legs and some on the outside near the top of the leg. This seems to weep after a while and gets sore. I have washed her down with dettol. This seems to help and I also spray with first aid spray by Johnstons. It seems to clear up with this.

Could you advise me as to what it is, and what I can do for her?

sincerely
Dolores Smith
Tappen, B.C.

Dear Natural Life;

The reader's goat has probably acquired a dose of Goat Pox, very closely akin to Cow Pox.

Description: pimples turning to watery blisters, then sticky scabs on udder. If scabs are removed before ripe, weeping sores remain.

Used to be a very common disease, occurring in widely varying degrees of severity. Less common since dairy hygiene has been introduced, such as udder washing before milking, and teat dip after milking.

Cure: time and gentle milking. Internal garlic treatment (either garlic tablets or whole raw plant) and Epsom Salts in concentrate will help speed recovery. Dusting with Boracic Powder will control discomfort. A veterinary dusting (powder) spray would be preferable to the wet type spray.

The first attack usually gives immunity to Pox. Hope this answers the query.

John Foster
Quarry Farm
Cayuga, Ontario

P.S. Goat Pox is catching—milk that goat last.

Dear Sir;

Please find enclosed two addresses for goat magazines that could be of interest to your readers, especially Mrs. Frank from Iowa in number 14. SHEEP & GOAT RAISER, Box 1840, San Angelo, Texas, 76901. (angora goats) DAIRY GOAT JOURNAL, Box 1908, Scottsdale, Arizona, 85252

sincerely
Mike Danylyszyn
Toronto, Ontario

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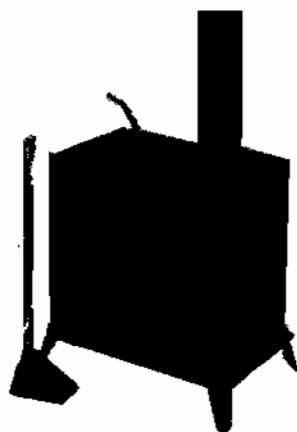
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Dear Wendy;

I really enjoy your magazine, especially the Natural Lifeline. I hope someone will be able to help me with two problems I have.

I would like to know if it is possible to purchase a "shake splitter", either new or a used one in working or repairable condition.

Secondly, I have an old wood stove in very good condition, except for the trim on it which seems to have been chrome plated at one time, but now it is peeling off. I have been trying to locate a heat resistant spray paint.

sincerely
Peggy Huitikka
Stratton, Ontario

We hope that you get some help, Peggy, but please don't use an aerosol spray to restore the chrome. Aerosol sprays have been proven to be very bad for the environment and there's always an alternative. NL

Dear Lifeliners;

With the summer upon us, it feels time to clean our bodies and feed our blood with good clean fruit. Unfortunately, unless you have access to private trees (or your own), you are forced

to eat fruit that has been sprayed countless times with poisonous, life-destroying chemicals. I'm having an especially hard time finding clean fruit in south-western Ontario. Yet I know there must be plenty of folks with clean trees out there. How about getting a fruit pool together? Creating a circle where you can buy, trade, or sell your good fruit (plus enjoying the beauty of community—people coming together, living a right-on ideal).

The same holds true for vegetables, grains, seeds, etc. All the products of the land or your work that you are in the position to share. Also, is anyone into, or wishing to get into, bulk ordering?

It seems people can do anything if they come together. If you have any ideas, anything to share, know people who want to come together or are already together, please write.

Peace
Mari
c/o Sugerman
RR 3
West Lorne, Ont., N0L 2P0

P.S. I have apples!

Dear Natural Life;

We are currently setting the wheels in motion for an ambitious and unique

undertaking. We are working towards establishing an alternative community with the purpose of assisting emotionally disturbed and disadvantaged young people to cope successfully with our modern world. The de-humanized environment in the city, the fragmentation of the family unit, lack of community, violence, and a myriad of other factors have all taken their toll on the future hope of mankind.

As the means to our end we are aiming to establish a cooperative learning environment with a strong emphasis on survival skills (both those useful in the wilderness and those which are adaptable to the city). Our program would be human value orientated rather than material value orientated and would be geared toward fostering feelings of self-worth and community. In order to accomplish this we have need of as much assistance as we can get, both in the form of advice and contributions. Your ideas are always welcome. Other possible contributions include land offers, labour, equipment, financial aid, etc. Your help can and will make our project a success and a lasting influence upon our society. Write us!

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Address _____

Dear Natural Life;

Re: Shirley Aucoin's letter in number 14 about stone seed. Here are some facts that might be of interest to her:

Stone seed is also called grom-well and is a kind of millet (lithospermum ruderales). It is a relative of lithospermum arvense, a grassy plant with yellow or orange flowers and hard, stone-like nutlets. It belongs to the borage family. This millet is not to be confused with White French millet used in cooking. It's more like millet birdseed. It is found in the dry regions of Indiana and other states of the Midwest.

The Shoshone Indian squaws of Nevada used a water extract of this plant for birth control. No research is available on its effectiveness as a contraceptive. Dr. William Breneman observed that the extract produced powerful inhibitory effects on hormones such as oxytocin which suppresses blood pressure and controls contraction of the womb. Carmack found it to be one of a group of unstable substances known as polyphenols.

respectfully
Hal Lussow
Chartered Herbalist
Toronto, Ontario

Dear Natural Life;

Roberta Elstone wrote to you in issue 14 asking for recipes using wheat sprouts in bread.

In their cookbook, *Ten Talents* Rosalie and Frank Hurd give a lovely recipe for this bread:

Sprouted Wheat Bread

- 3 c. lukewarm water
- 2 tbs. dry active yeast
- ¼ c. honey
- 3 Tbsp. oil
- 1 Tbsp. salt
- 2 c. wheat sprouts
- 4 c. whole wheat flour
- unbleached flour

Dissolve yeast in 1 c. of the water. Add honey, salt, oil and whole wheat flour. Beat well. Let this sponge raise in a warm place. To raised sponge add: 2 cups ground sprouts. Add more flour to make a soft dough that is not too sticky. Knead well till smooth and elastic, adding flour and oiling hands to keep from sticking. Place in oiled bowl. Cover. Let rise in warm place till double. Shape into loaves. Place in greased bread pans. Let rise till almost double. Bake at 350 degrees for 1 hour. Remove from pans, cool and wrap.

And now my own little hint for any of you who have a dandruff prob-

lem. Before you wash your hair, make some nettle tea, cover and cool. Now proceed with your shampooing as usual and rinse well. Pour the cooled tea over your hair and rub it well into the scalp. Do not rinse off. This treatment should be repeated as often as needed, depending on how severe the problem is. An extra advantage of this method is that the nettle acts as a mild conditioner on your hair.

yours truly
Dolores Wooton
Toronto, Ontario

Dear Natural Life;

I am a new reader of your magazine. Sometime ago I got a bad coughing spell and on reading your magazine found a recipe for cough.

But: I can't find the following: paregoric, ipecac, or lobelia. I have tried the local herb stores and some have never heard of them. Also, five cents worth of horehound leaves—at today's prices how much?

R.E. Mathews
Edmonton, Alberta

Dear Natural Life;

I was wondering if anyone out there knows of where one can buy or order heavy gauge plastic bags. Presently we go through a lot of garbage bags—bagging up manure, seaweed, leaves, etc. and I really hate the waste but like the waterproofness. Even at the cost of a few dollars each, a permanent set would make me happy.

Solveig Nilssen-Frigstad
Garden Bay, B.C.

Dear Sir;

The use of 2,4-D to control Eurasian Milfoil weed in Canadian waters is becoming increasingly and understandably unpopular because of known problems with 2,4-D.

I wonder if any of your readers would have any idea of the cost of artificially freezing the foot of water in which the weed grows. If a floating freezing plant could be used to freeze both the weed and the layer of water in which it grows, the ice and weed blocks would rise to the surface where they could be collected for disposal.

While I am sure that it would be expensive, there would be no long-lasting damage to the water supply.

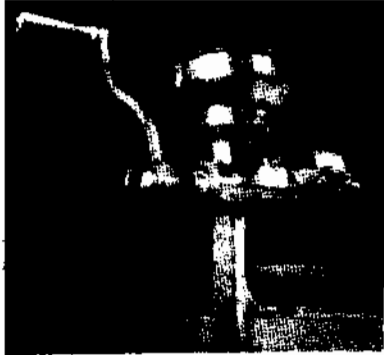
yours truly
Ralph Wass
Valemount, B.C.

Dear Natural Life;

Who can tell me of any North American-made air-tight wood cook stoves with ovens?

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Hi Natural Lifers;

Sharron Myers wrote from Pembroke, Ontario asking for any helpful solutions to the groundhogs eating up her garden. We live in southwestern Alberta and are continually battling the prairie gopher. He's a much smaller creature than a groundhog, but ever so persistent. Last year when my bedding-out plants began to slowly disappear I thought I had plenty to share with the cute, hungry little fellows. I soon learned they don't share. I tried live trapping then and letting them go away from the garden but this solution did not work as they were right back in there by the next day if not the next hour. I figured I had given them fair warning. By the time I finally took to shooting them, I had very few bedding-out plants left. This year I broke up a new garden plot and trapped the few gophers who came to live in it well before seeding. All is well.

I can sympathize with you, Sharron, about shooting the groundhogs. A friend was visiting a few weeks ago and had heard of a gopher solution. He suggested I plant old beer bottles or better yet, get hold of a mess of those non-returnable pop bottles and take and bury them half way down in the soil every six feet or so all the way around the garden. He claimed the wind whistling over the tops of the bottles would keep the gophers out. Wonder if it would work for groundhogs too?

all the best
Bev Guppy
Pincher Creek, Alberta

Dear Natural Life;

In regards to Sharron Myer's letter on page 10 in issue number 14: I have just read in Mother Earth News (of course, cannot find the article now) where this problem of groundhogs was solved by pouring the night's chamber pot down the groundhog hole and plugging the hole with dirt. They said the first time, when returning to the hole, the dirt had not been dug through and each succeeding time as well. In time, the distance he had to walk in search of a groundhog hole became greater and greater.

sincerely
Emily Scott

Dear Natural Life;

Your magazine is better every issue. To answer Sharron Myer's letter:

Trap your groundhogs with a \$40. Catch Alive trap. You could buy or borrow, maybe make your own

trap. I caught one by cornering him and laying a large garbage pail in front of him. He walked right in with no fuss.

Growing groundhogs will eat a twenty foot row of lettuce in a morning meal. Therefore it is impossible to share a garden with them.

To comment on Eric Beck's letter:

Surely you could not have read much about radiation from nuclear waste and proposed disposal of nuclear waste? Radiation is dangerous! Why play with nuclear reactors when there is an alternative?

Would it be possible to find out about allergies to bee stings? How allergic can some people be? And is there a cure?

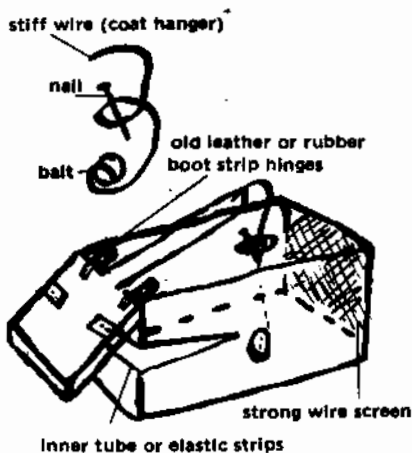
many thanks
Paul Razeau
Portage du Fort, P.Q.

Dear N.L.;

In response to Sharron Myer's groundhog problem, she could have a box trap built from scrap lumber. (See diagram) She could capture all the animals and release them elsewhere. The trap should be visited as much as possible, cuz once the animal is trapped he'll hurt himself chewing a hole to get out. The screen on the back is to check what animal is inside.

Leo Kappi
Rankin Inlet, NWT

P.S. Arctic Char run is on, big event here.



BOX TRAP

Dear friends;

Just a short note to offer a few words. In issue number 14, Gus Teerling wanted to know how to control potato bugs. I've heard from sev-

eral people that gathering the larvae and the full grown beetles from a few plants, grinding them up and diluting with water is a very effective repellent. You then spray your plants with this solution. Seems to work with other bugs too. I've never had the chance to try it as I've only found two or three potato beetles in two years.

This year we were bothered by a canker worm in the new apple trees. I tried spraying Thuricide on two occasions and all the little villains stopped feeding and disappeared. I'll be trying it on cabbage worms this summer as I've tried everything else to no avail.

...And if anyone has advice on what to do or how to keep a greedy groundhog from devouring all my peas, greens, turnips, beets, etc., other than a fence, it would be helpful.

Also, if you sprinkle hardwood ashes on the carrot, radish, and cabbage family plants, they won't be bothered with root maggots—just make sure you do it as soon as the little plants appear or when you make transplants. Have a gentle summer.

Vickie Carleton
Baker Brook, N.B.

Dear Natural Life:

Could you possibly assist me with a recipe I have been looking for? It's the recipe for Essene Bread. If you are not familiar with this bread, it is made from nothing but sprouted wheat, water and nothing else. If you could help me or direct me to someone who could help, I would really appreciate it.

Beryl M. Mercer
Orangeville, Ontario

Dear People:

Would you please help us? We are hoping to buy some acres close to people with our values, ideas, beliefs. We are working towards a self-sufficient life and organic methods. We believe in non-competitiveness, non-profit making, non-consumer society. We want respect for all human beings. We are thinking of not sending our children to the present school system.

We enjoy reading, studying, and believe that it is important to devote time to any manifestation of art. We want to be close to people who may feel bad with the idea of going to a place where they are served Dole bananas from Nicaragua, Castle and Cooke pineapples from the Phillipines and Nestle coffee from hungry Brazil.

We would prefer to locate in B.C. or Alberta, although the location is not the important thing. But it could also be that we are in a cloud respecting finding the kind of people we would like to share our lives with. If it is so, please feel free to say so.

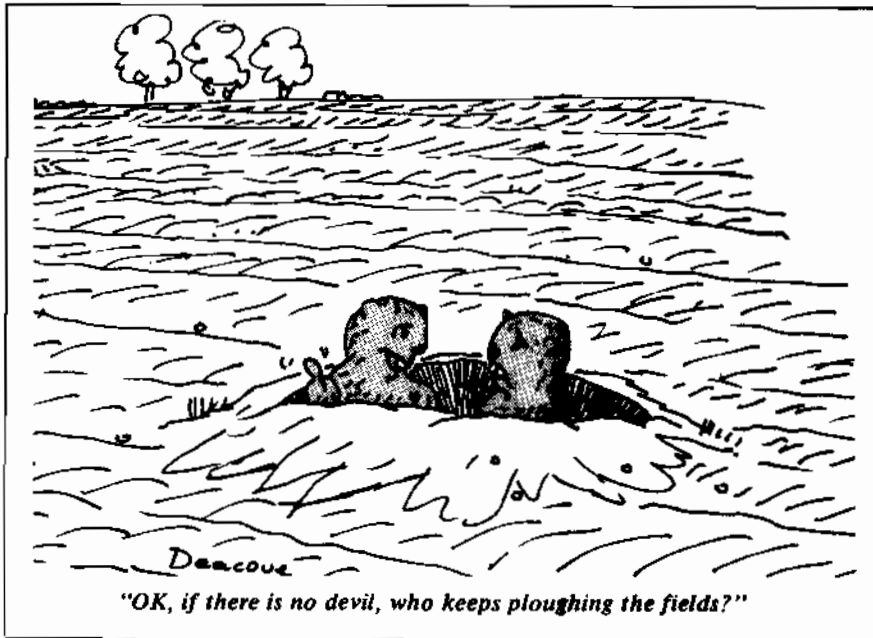
We were thinking that maybe you would know people for us to contact. Could it be? Thank you in advance for your answer.

cordially
Jake & Alida Friesen
Lenswood, Manitoba

Dear Natural Life:

Could it be at all possible to obtain plans to build an old fashioned sideboard cupboard? My grandmother had one and we would like to build one. Thank you for anything you can do.

Mrs. A. Kolff
Warton, Ontario



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TOWN & COUNTRY PRODUCTS

Dear Wendy & Natural Life;

Greetings from the bombed-out Our People School of Survival & Self-Sufficiency. OK. We are shut down. We can't operate on the basis that we originally started. This is our sixth attempt at some sort of community (which we think is the only hope for men to ever get their act together). Each time we come a little closer to getting it all together but I am here to tell you that we haven't made it yet.

It was a great experiment and it's too damn bad that it didn't work—at least we have a mass of knowledge

about what won't work in a community situation and are that much closer to making it work.

We based the whole concept this time on individual responsibility and obligation and we found that I/we were not smart enough to teach that to people from cities—yet. We can teach it to our children over a period of ten years +, but city people just do not as yet have a set of goals that are compatible with a survival situation/farm life/country living/truly living in harmony with the natural life (ie) the way of the bush.

I don't know how much of this

I will reach you with, so I will put it this way: In our two year operation we dropped \$20,000. I know that doesn't sound like much in this time of high finance, but it wiped us out. We aren't complaining because we knew what we were getting into and knew all of the risks that were involved. It's just that now we have to get out.

We can no longer even afford to answer the inquiries. Four of us put all of our time, resources, effort and everything that we owned (plus the \$20,000) into the School for two years and it didn't go. That is, it didn't accomplish what we had intended: to change the world into a better place to live, or at least begin the change. Would you believe society and man are too far gone?

One of the off-shoots of the Our People School failure was the Survival Quotient test—runs to over two hundred questions in questionnaire form. Tests survival level of the person tested. (Lots of damn hard work put in that thing and over thirty years experience). Conclusion: we can fairly accurately describe a survivor, all the way from his eating habits, sex habits and down to his philosophy.

Further conclusion: in the event of major depression (that we are headed into now), economic collapse (likewise), ecological unbalance (ditto)—that is, any major upheaval—the projected population survival rate on the North American continent is less than 10,000 people.

Baby, I don't like it and I tried to do something about it—but as yet, I'm not smart enough to do anything about it. Here I am in possession of information that directly affects the lives of 300 to 400 million people and can't do anything about it. But then, species have disappeared from the earth before and the world still turns, and if man goes down the tube, we can reconcile ourselves by saying that is what was intended.

Don W. Cunningham
for Our People School of
Survival and Self-Sufficiency
Dunster, B.C.

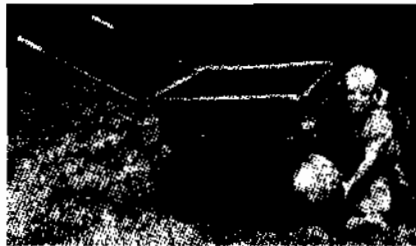
Dear friends;

In answer to a letter from Albert and Anita Hille, Windsor Ontario, regarding their inquiry about a fruit juice extractor that drains the juice by a rubber tube at the bottom, I asked my sister-in-law who has one, where you can get one like that. She replied that they are available at health stores. I shall also write Organic Gardening and Farming magazine about this. Their readers will no doubt know the answer to this question if yours don't.

I find Natural Life very good

roll out the BARROW

As you have struggled across muddy ground with your rusty, wobbly wheelbarrow, you must have wondered whether human ingenuity could have invented something more practical ... It has! It's called the "BALLBARROW". It makes the traditional wheelbarrow a museum piece. BALLBARROW won't rust, dent or decay; is staggeringly strong. The unique ball not only makes it easier to push heavier weights (like soil), but effortlessly rolls over, instead of rutting into soft ground. Because the unique pneumatic ball spreads the load over a greater surface area, it is more stable, less likely to tip. It is so tough, you can push a full load over a jagged pile of rubble. The body has a heaped capacity of 4 cu. ft. and is made of tough, durable, polyethylene; it will not rust or be affected by chemical action and is easily cleaned. The heavy gauge plastic coated tubular steel frame is rust resistant. BALLBARROW is the very latest, go-anywhere, all-terrain vehicle, for gardening etc. ... definitely the only way to go.



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reading. The letters are so down-to-earth and friendly, like letters to friends and relatives. I hope more and more Canadians across the whole country, from B.C. to Newfoundland will hear about this magazine. It is going to grow, I hope, as more and more people give their input.

yours sincerely
Lillian Armeneau
newsletter editor and librarian
Okanagan Organic Farm & Garden Club
Kelowna, B.C.

Dear Natural Life Friends;

We've been buying your magazine at newstands, and surely enjoy both the articles and Canadian orientation. Would like to learn more of alternate education (ie) teaching children at home and the results of this approach—also, the Dept. of Education's position.

I read with interest your article "Build a Garden Walkway" in number 13. Joan calls for a gallon of creosote to stain the wood.

We are developing our children's playground here, and had requested creosote to use on the logs. The camp superintendent tells us that it has been shown to be cancer-causing. In fact, B.C. Hydro has apparently quit using it for this reason. So he suggested we not use it on any of our playground logs, and that it is better to replace the timber when needed and use different stain to achieve a finish.

Thank you for your wealth of information.

sincerely
Eileen Palmer
Vancouver Island, B.C.

Here's something we recently read in *The Log Home Industry Newsletter* (Feb. 78): "Zinc naphtherate is clear, can be brushed on effectively, has good preservation abilities and poses no health hazard. Solutions of 16 to 18% zinc naphtherate are available. A major wholesale supplier is Nuodese, 34 Industrial Ave., Toronto, Ontario." NL

Dear Natural Life;

I know there must be many other Natural Life readers with kids in school who want to take them out, and people with kids not yet in school who don't want to send them.

Using the address you gave us in number 13, I have taken a double subscription to *Growing Without Schooling* which I share with another mother.

Under this scheme, the initial subscription is \$10. (US) per year and

each additional subscription is \$2.00. The subscription holder mails out the additional copies to whomever they are sharing with. If any unschoolers not yet reading G.W.S. would like to share our subscription and further reduce all our costs, please write to me!

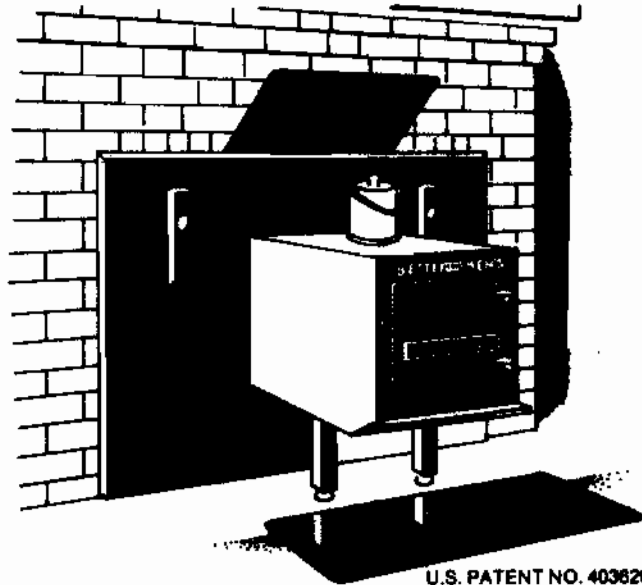
The G.W.S. newsletter is every other month; truly a breath of pure oxygen in the atmosphere of oppressive stench of compulsory attendance.

Also: would you consider occasionally publishing a directory of unschoolers in Canada so that we might correspond? If you do, include my name!

Blessings
Mary Syrett
248 Airdrie Rd.
Toronto, Ontario, M4G 1N1

If any readers want their names to be on a directory list of unschoolers, just drop us a line. We'll publish the list in the next few issues so that like-minded families can get together. People may want to use code names with just a city and province. We will forward such letters to the proper persons, if sent to us IN A STAMPED ENVELOPE. NL

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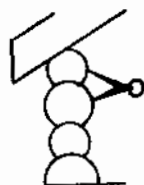


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Dear Natural Life:

Thanks to all the parents who got in touch with me about the "no school approach".

There now is enough of a people network to make a personal contact newsletter worthwhile. Much of it will be about "homeschool"—kids learning naturally at home. In a larger context, the newsletter will be about home-centered growing with an emphasis on natural parenting.

The purpose of it is mutual encouragement and support for those of us who feel isolated in our struggle to free our kids from conventional child raising practices.

Anyone can receive the first issue by sending a S.A.S.E. and 25 cents. In the U.S., a S.A.E. and 50 cents.

I'm sure you'll receive many "no nukes" replies to Eric Beck's letter in issue 14. Here are some government sponsored facts that show how nukes can be avoided without having "large numbers of people move to isolated spots".

The recommendations of this report must surely have been suppressed because they certainly haven't been publicized!! The Toronto Globe and Mail recently quoted a consultants' report as saying that four nuclear generating stations planned by Ont.

Hydro may not be needed. The newspaper quotes the report prepared by Middleton Associates for the royal commission on electric power planning as saying measures for reducing energy demands together with alternative methods of generating electricity could equal the total generating capacity of the four nuclear plants.

The report said the contribution from several measures such as increasing use of renewable energy sources could be equivalent to the 13,000 megawatt capacity of the four nuclear generating stations planned by Hydro.

This is in reply to Julie Koehn, also in number 14 about lead in newsprint. My question is: even if the lead is just in coloured linotype printing (which has been stated by the American Medical Association's department of environmental, public and occupational health), what about the other chemicals or toxic substances in newsprint and printing inks? Also, just because offset ink is organic, that doesn't necessarily mean it can't be harmful. And, in case no one else mentions it, purist organic gardening sources usually mention not to use ashes on one's garden if paper, especially newspaper, has been burned. So I assume there are more, if less potent, harmful substances in newspaper than lead.

Hoping to hear from more Natural Lifers...

Louise Andriashyn
RR 1
Anola, Manitoba

Dear Natural Life:

In number 13, Vilma Eichholz mentions our great need of vitamin C and our dubious survival without oranges and other citrus. I've never understood how a well-baked potato conserves any of its vitamin C, tho' I'm all ears to learn!

However, if we look to our ancestors on this land, we find the native natural people lived well and full of health with no citrus, little potato and lots of evergreen tree teas. There are many stories of colonists and explorers suffering from scurvy and the like being nearly instantly cured by the friendly natives offering them spruce needle tea which they then drank.

It's simple: boil water, pour over the green of your choice and steep until it's cool enough to drink—say ten minutes—don't let it sit or the vitamin C gets lost though the flavour remains.

Our children like spruce tea, but I like cedar tea as much. I think Euell Gibbons liked pine tea.

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When I'm walking or snow-shoeing about I like to nibble on cedar leaves and white pine twigs and needles. Occasionally red pine too. Usually I chew the juice out and give Earth back the pulp.

In the Spring, the tender spruce buds (hemlock too) are delightful (up to at least mid-summer) and open children need little prompting to enjoy this delightful snack and offering of our neighbours, the evergreens.

Jethro Kloss, in Back to Eden, suggests evergreen teas for people with little vitamin C and chlorophyll in their winter diet. He also gives much focus to the healing energies of our friends and neighbours the trees.

On another subject, what can we grow here to make our own rope? And what's the process?

Happy Nibbling
Beaver
Morninglory Farm
Killaloe, Ontario

Dear Wendy;

Re: Crop to grow for rope

The crop to grow to make rope is Hemp (Cannabis Sativa), Jute (Corthcorus Capsularis), Sisal (Agave Sisalina) or Flax (linum).

As each of these plants need different treatment to yield rope fibre you will first need to find out if any of them can be grown in your area by contacting your Agricultural Representative. Then see if seed can be obtained, and find out information on its cultivation. Once the crop is found that you can cultivate, perhaps the Brantford Cordage Company, Brantford, Ont., can give you some more helpful info.

A good useful rope can be made by plaiting rye straw. Thresh the grain out of the sheaf by hand and use the long straw without damaging it. Soak the straw overnight, let the excess water run out, then plait into rope using the same number of straws in each of the three plaits to make it even. Keep adding straw as you go along, keeping the plaits even.

Most pioneers used raw hide for rope, but I think that you could sell a hide for enough money to buy rope for a lifetime.

Your idea is a good one and should add something to the store of knowledge needed for Disaster Survival. Around London, Ontario, I saw a vine growing in the woods that looked something like virginia creeper. This type of vine can be split into strips and braided into a rope in an emergency. The outer bark should be stripped off and the bark strips allowed to dry a little before you attempt to braid.

On the west coast the cedar bark sometimes hangs down in large

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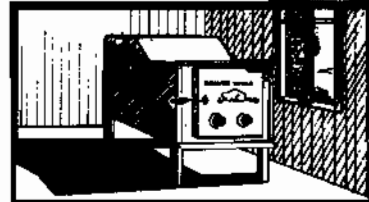
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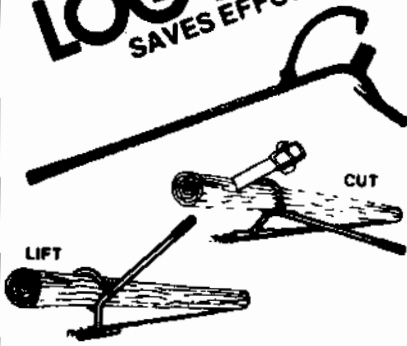
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and long shreds. This can be pulled off and the soft portion can be used to make rope or weave garments after beating to soften it.

sincerely
Wm. J. Hogg
Victoria, B.C.

Dear Wendy;

Doug Taylor requested a simple soap recipe. Here is a very simple one:

9 cups fat (soft but not liquid)
10 cups cold water
1 cup Javex Bleach
Mix in stoneware crock. Stir all together. It will turn white. Add one container Gillette's Lye and keep stirring. It will gradually get hot. Stir for about 20 minutes or until you feel it thickening. Then pour right away into empty milk cartons and leave for a few days to set, but not hard. Then tear off cartons and cut soap to required sizes, and set aside to harden.
NB—use wooden spoon, or stick to stir

This is a lovely white soap, and so easy to make. Good luck.

sincerely
Betty Paterson
Salmon Arm. B.C.

Dear Natural Life;

Wanted to mention something about your cover story on issue number 13—Tax Sale Land. Another way these kinds of land show up on the market is through agencies. These agencies obtain the land through tax sales and private purchases, list them in a catalogue and sell them by mail order. Often the impression they give in the catalogue about these parcels of land is obtained from hopelessly out of date sources, and therefore is incorrect as to the current status or description of the land, roads, nearby settlements, etc.

Of course, they cover themselves by saying "according to our maps" or "information given us", not saying that the maps are thirty years old, and so on. I'm not trying to say that these agencies intentionally mislead people, but I AM trying to tell people who are considering these types of purchases to check out the information carefully, or risk being disappointed. As usual, "Let the buyer beware."

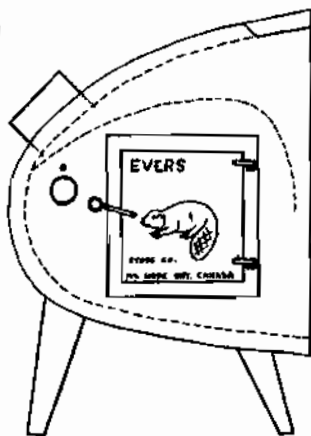
Betty Ramsay
Box 607
Brandon, Manitoba, R7A 5Z7

sincerely
Betty Paterson
Salmon Arm. B.C. Incidentally, folks, Betty has produced a fine index of the first year of Natural Life. Costs \$1.50. NL

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Dear Natural Lifeline;

I feel that the article in issue 13 by Catherine Dunphy, Tax Sale Land, leaves readers at a negative dead end, with nothing. There is more!

I haven't done any special research this year, but there is the Ontario Journal of Forfeited Properties (ie) land which has already gone through the one year redemption, and so is ready for immediate sale for an established price. Then there are several land companies in Toronto who do the same, as well as buy other cheap land direct from owners. They buy land anywhere in Canada. They then catalogue the parcels for an established price. They, too, wait a yearly redemption period, and guarantee clear title or deed. Of course, the price is up from the tax sale price, but one needs to consider what's involved.

I have seen some pretty nice parcels of forty to one hundred and sixty acres with prices like \$1,900 and \$4,000. Northwestern Ontario has lots of long abandoned homesteads which change owners occasionally. I bought my first parcel from a land company, but needed an adjoining piece to fit in with my plans, and so I bought it from its owner. I am surrounded by old homesteads.

Gerry Schmidt
Dinorwic, Ontario

On this same subject, we recently noticed a newspaper report with a good message for our readers.

A Toronto real estate company, New York Shoe Store Ltd., recently was fined \$21,000 for falsely advertising property. The Toronto Globe and Mail reported "lakes" that turned out to be slag slimes and a "magnificent vista" that was really scrub brush and swamp. The fine apparently is one of the largest ever imposed under the false and misleading advertising section of the Federal Combines Investigation Act.

But not a penny of the fine money will go to a seventy year old man who in 1976 spent his life's savings on forty-one acres of this almost useless property with no timber rights nor road access. Once he discovered the truth about his purchase he tipped off the authorities about the false advertising.

The ads were published by a subsidiary of the company, Ontario Journal and Sales Tax Register and the sales were handled by another called Municipal Land Tax Land Disposal Agency. Ads were placed in numerous large-circulation U.S. magazines, according to the article.

Buyer Beware!

Dear Natural Life;

Our farm borders were sprayed by Ontario Hydro today and we are upset. The brush is very low and we accept our responsibility to keep it cut. Hydro simply sprays at will—with no prior notice. Today is a gusty day when spraying should not be done and part of it was done along a hayfield and along several small clearings that we had planned to use for specialized row crops.

Because I am sure that many other people also face this problem yearly, can someone answer the following questions:

- 1) Would posted signs saying "NO SPRAYING" stop Hydro from spraying?
- 2) Is it possible for individuals to negotiate arrangements with Hydro so that they accept responsibility for keeping the brush cut along their right-of-ways, in preference to spraying?
- 3) Would the same restrictions or lack thereof apply to the telephone company, the township, and the Ministry of Transport and Communications?

There may be varying restrictions in each province and I think it would be very useful to list the exact rulings in each province so that all of us can have concrete information as a starting point and can then decide upon action based on knowledge, rather than ignorance.

It is very upsetting to us that we spend a lot of extra time and work trying to avoid the use of harmful chemicals and to slowly develop our farm organically and then feel as though we are being bombarded constantly by outside forces over which we have no control and which strike without warning.

Thank you. We appreciate your magazine and its down-to-earth approach. It feels like you are people like us with common concerns and interests, not "media types" catering to a broad market with trendy articles containing little real information and using few writers who are actually practicing what they preach.

Kathy Martin & Joe Muething
RR 2
Englehart, Ontario

We've commissioned the Canadian Environmental Law Research Foundation to prepare an article answering Kathy's & Joe's questions. Look for it in our next issue. And don't forget our Environmental Action Kit No. 1 about Herbicide Spraying. It costs \$1.00 and is an attempt to organize available information about chemical spraying (what to do about it). NL



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INTERVIEW WITH NICK NICHOLSON



Nick Nicholson is a Canadian solar pioneer, perhaps the best known. He has designed and built seven successful solar homes, participated in the design process of a number of others, and planned a National Research Council Demonstration House in Ayer's Cliff, Quebec. He authored the immensely popular and useful Nicholson Solar Energy Catalogue in 1977—Canada's first solar energy book. His dynamic new book Harvest the Sun has just been published. Natural Life staff writer Diane Yamaguchi recently spent a rewarding few hours chatting with Nick....

NL Where is solar energy at today?

NN Solar Energy is definitely out of its infancy and can no longer be considered a fad. It is actually at an adolescent stage and is following the same ground rules as other technologies such as computers, automobiles, televisions, etc. Initially, costs are very high, then as there is market penetration it reaches a point where quantum leaps are made. Mass production and improvements serve to reduce costs and increase efficiency. This has been demonstrated already in solar energy. The solar system I am building today is twice as efficient as the one I built last year and costs less. Just simple logic.

NL What is the state of the market today?

NN A few years ago on a television program, I predicted that solar energy would be gaining wide acceptance in five to six years and I was considered by many to be optimistic. The state of the art today shows clearly that I was pessimistic.

Arthur D. Little, a major consulting firm in the U.S., has recently concluded a study that estimates two million solar-assisted homes completed by 1980. The multinationals are entering the solar fields. Solar energy will be exploited just like any other technology. Solar energy is not the answer to the maiden's prayer. Ultimately, the only solution is ethical business practices. In reality, there is no energy crisis; there is only a moral crisis.

Today there are available detailed plans for building solar systems. The only thing that was available a year ago was theory. This will provide a major boost to the proliferation of practical applications. In addition to solar, we

have major breakthroughs in other forms such as wind energy. For example, the Pavlecka Rotary Through-Flow Turbine, a new and simple device recently developed, harnesses the energy from the wind more effectively with fewer maintenance problems and can be utilized for wind, low head streams, and ocean currents.

Anyone that can build a conventional home today can build a solar home. All the materials are readily available and the expertise is fully documented.

NL What do you see happening in the next five years?

NN The next five years will see breakthroughs in annual storage solar systems. This type of system collects heat during the summertime and stores it for winter use. In order to accomplish this, new and better heat storage materials must be developed. Research programs currently underway are developing heat storage in what is known as "phase change materials". An example of a phase change material would be Glauber's salts. The advantage of using a phase change type of storage material lies in the fact that the energy is stored at low temperatures, unlike conventional sensible heat storage such as rocks or water where the addition of energy causes the temperature of the storage material to be raised. Any material changing form from solid to liquid or liquid to gas absorbs heat during that transformation without rise in temperature. This is an example of phase change heat storage. Obviously, storing heat at high temperature is difficult because the tendency to cool is more rapid. Whereas, if the energy is stored at a low temperature it has less tendency to migrate; it's easier to contain.

"Almost immediately after I completed my oil-fired house, the price of oil doubled due to the mid-east oil crisis. This dissolved the illusion that I could live back in the woods free of worldly interference."

NL What are your feelings on nuclear energy?

NN For illustration purposes, nuclear energy can be thought of as a more powerful form of electrical energy. When electrical energy first appeared on the scene, it was unmanageable and misused. Nuclear energy is following the same path, only the consequences could be far more disastrous. There is little doubt in my mind that proper safeguards have not been developed with nuclear power and until such safeguards are developed I consider it best put on the back burner.

NL How did you get to where you are presently in the solar field?

NN Born in Brooklyn, I moved continuously away from the city until I reached Montauk Point at the end of Long Island, at which point I ran out of land. I picked up an education along the way at the New York State University Farmingdale, Long Island campus studying landscape architecture and horticulture. Faced with the Atlantic Ocean and not being a very good swimmer, I took the jump to Canada. Actually, I fell in love with Canada on a ski holiday and decided to return. A few years went by when I had a severe ski accident where I broke my back. Five months spent immobilized in the Montreal General Hospital gave me the time to think. And my thoughts ran towards appreciation for all the care I was receiving in my helpless state. Soon after my recovery I fell under the influence of the *Whole Earth Catalogue* and the "back to the land" movement of the sixties. Along with this new awakening of basic values I began a series of philosophical studies. From a period spent doing Transcendental Meditation, I spent a year with a Gurdjieff study group and then entered the Rosicrucian Order, AMORC, and I've been studying with the order ever since.

NL Can you give us some idea of what you've been studying?

NN Life. Awakening the human potential. As a result of all these studies, I have learned to work with materials that are at hand. My pre-solar building career involved recycling barns and demolition materials into new homes. The progression from there was to work with the sun.

My introduction to solar use began on the level of solar gadgetry. Building a solar herb dryer and a rudimentary solar water heater as a hobby were my only accomplishments. What prompted me to take solar use more seriously involved the construction of my present home. It was built four years ago, and the oil fired heating was chosen over electric heating to provide a measure of economy. Almost immediately after completion, the price of oil doubled due to the mid-east oil crisis. This dissolved the illusion that I could live back in the woods free of worldly interference. So, since then, I have come out fighting.

NL If you can do this, can others also do it?

NN That the potential is there in every human being is best described by the words of Christ: "All this and more shall you accomplish."

It is necessary to be aware of the potential. This can be thought of as

an awakening. What follows then is hard work. However, this hard work is more easy through the clear vision of being on the path.

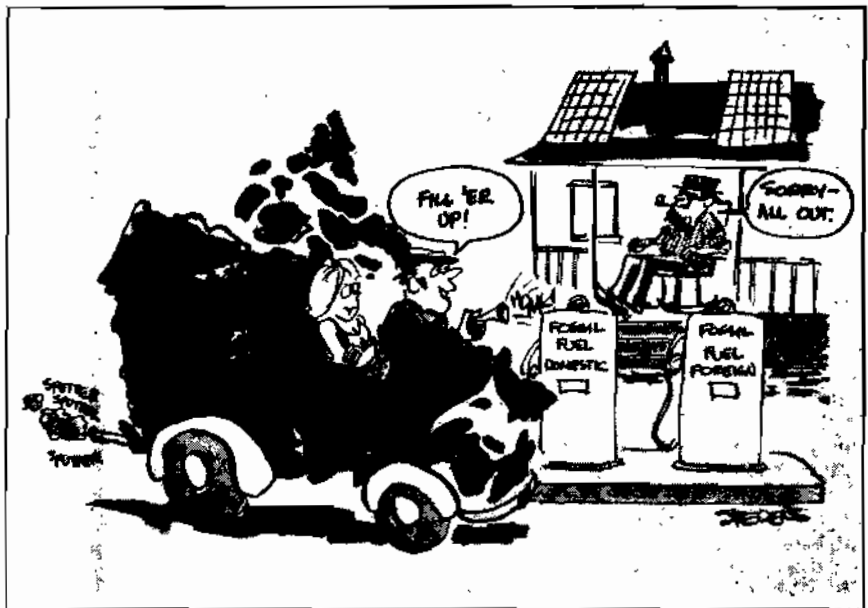
NL What is your opinion of Government's role in solar energy?

NN An understanding of government would bring about the realization of its limitations. The very structure of government renders it inadequate to cope with innovation. Innovation is perhaps ninety inspirational. When inspiration arrives it is mandatory to act immediately. In other words, if I get an idea, a flash at three o'clock in the morning, I begin work on that idea at seven that same morning. To do the same with government, I would first have to make application, which would be followed by meetings over a period of six months to a year and by then either the Americans or the Russians would have already done it.

Another thing is that government works on precedent. An example of how this demand for precedent defeats innovation can be seen in the work of Marconi and his wireless telegraph. When Marconi proposed to beam a message from England to the Americas, he was acting on nothing more than an intuitive feeling that it could be done. When he approached government for funding, it was pointed out to him, quite rightly, that radio beams would go straight into space. Acting on his hunch, Marconi went ahead and did it anyway and accomplished the sending of radio signals halfway around the world in spite of the maledictions of the experts. It was only afterwards that the ionosphere that bounces the radio waves back to earth was discovered.

Essentially, if our government had committed a fraction of the dollar committed to nuclear energy to solar energy, we would all be living in solar houses today. I am a great believer in preventive maintenance. Our oil reserves are going to run out; whether it be fifty or a hundred years is academic. The question is — do we develop alternative sources of energy now or do we wait until the last minute? Either way the alternative energy sources will be developed.

- NL -



SOLAR GREENHOUSE BASICS

by Girvan Harrison
Trenton, Nova Scotia

Someone once said that any misfortune contains the potential of a larger good fortune. Think of the energy crisis and your typical backyard greenhouse. Due to the rising cost of heat for a conventional greenhouse, we have witnessed the birth of an unorthodox structure called a *solar greenhouse*. It is a place designed to catch and store the heat from the sun and return it to the structure at a later time. It works.

But a solar greenhouse has to be planned carefully. Close attention must be paid to site orientation, the south side angle, and most important, storage of the captured solar heat.

SOLAR ORIENTATION

Orientation is simple. Have the long side of the greenhouse facing true south to catch the most sun. This condition can easily be fulfilled with a free-standing structure. If you choose to attach the greenhouse to your house or barn, try to place it so that it gains as much southerly exposure as possible. Ideal conditions cannot always be duplicated and this is one case where as close as possible is good enough.

Solar angle is also not that critical. There are two simple ways to determine the proper vertical angle for the south face of your greenhouse. One way is to get a sun path diagram and look up the altitude of the sun at noon of January 21. The desired angle of roof slope is perpendicular to this solar altitude. The slope of the north (opposite) wall may also be determined—this time by looking up the solar altitude at noon on June 21. Perhaps a simpler way is to get an atlas, estimate the latitude of your proposed greenhouse, and add 20 degrees. We live at latitude 45 degrees - 40 feet so our theoretical south roof angle should be 65 degrees - 40 feet. I made mine 50 degrees with a partially glazed hip roof to gain extra floor width without putting the roof of the greenhouse above our house eaves. So you see that slope angle is not too critical—get as close to the proper vertical angle as you can be comfortable with and it will work fine.

HEAT STORAGE

There are two aspects to heat storage and both are important. First, trap enough heat, and second, cut down on heat loss. These two goals are the nitty gritty of solar greenhouses. The success of your greenhouse depends upon how well you fulfill them.

In your basic design, try to channel an *extra* amount of sunlight into the greenhouse. This is done by installing reflective paneling on the outside of the south side which is angled to deflect sunlight to the north storage wall.

Tests have shown that this method allows forty to fifty percent more light to be aimed at the heat collectors. These panels could be made of foil-covered polystyrene on plywood and could be swung up to cover the south wall surface at night. Natural reflectors such as water or snow might also be used but are not as reliable.

With all this energy being beamed into the greenhouse, it must be stored. There are different substances which can be used for heat storage—concrete, bricks, rock, soil, salt hydrates, water, or even old motor oil. Each has its pros and cons. Rock is readily available and maintenance-free but requires large storage areas and usually a mechanical blower to capture and release the heat. Water is readily available, is able to store three or four times as much energy per pound as an equal amount of rock, but must be kept in proper containers to be effective. Salt hydrates (which could be the storage medium of the future) are eight times better than water but have limiting heat-return characteristics. For the present I suggest a combination of water, rock, and soil as storage medium.

Here is a rule to calculate how much storage material is needed: allow three gallons of water or one hundred pounds of masonry per square foot of glazing. (This applies to Nova Scotia and could be adapted to other regions.) If the south side of the greenhouse is 22 x 10, you need approximately six hundred and fifty gallons of water or eleven tons of rock as the storage medium. This sounds like a formidable quantity, but if a number of substances are used, an economical storage plan may emerge.

One partial source of storage could be the greenhouse floor. If you don't use planting benches, but plant right on the floor, you not only gain a greater planting density but the soil stores heat. An 11 x 22 greenhouse has the daily capacity of producing up to 2,500 BTU's for each one-Fahrenheit degree change in soil temperature. Another aid would be to use a black plastic mulch around the plants.

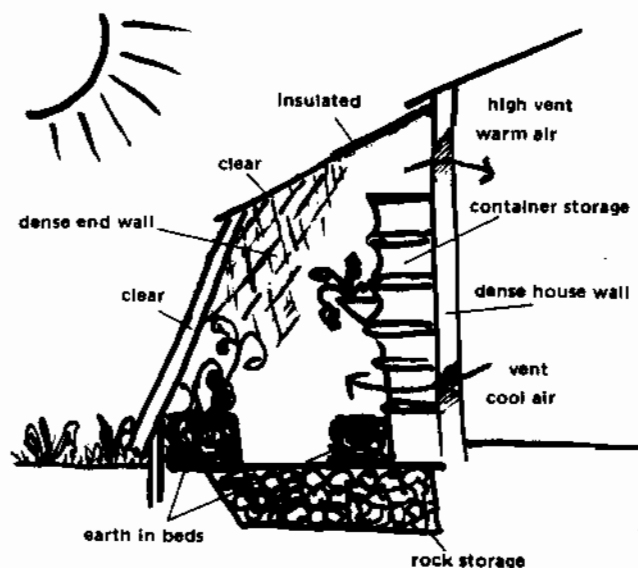
The north wall is used as the primary storage area. Using water as the storage medium you can calculate the expected BTU's by remembering that if the temperature in a forty-five gallon drum raises 30 degrees F, you will have stored about 11-12,000 BTU's of heat energy.

If you plan to use forty-five gallon drums, paint them a dark red or blue. These colours are used rather than black because they reflect red and blue light back to the plants. This has been found to be beneficial to plant growth. The drums should be stacked so that they do not touch the north wall. You should also add rust inhibitor to the water.

My choice of water containers are strong one-gallon plastic jugs. These are filled with dyed water and stacked densely like firewood in the storage area. The water may be dyed with any substance that will stay suspended in the liquid and give it a dark colour to absorb more heat.

Using smaller containers is perhaps better because they reach a more even heat than water in large drums. They also make a more pleasing wall. No matter how carefully you choose and paint a forty-five gallon drum, it is unsightly.

The other partial source of storage is rocks. Use your imagination. They could be piled to raise the planting beds. The subsoil might be removed from the greenhouse and two to three feet of fist-sized rocks placed on sheets of insulation and covered with planting soil. Flagstones could be laid on walk ways, or even small rocks placed in wire containers and piled around the walls.



Whatever your choice, use a combination of materials and build as much storage ability into the greenhouse as possible. If it gets too hot you can always vent the heat away—or into your house.

But take precautions to keep heat from being unintentionally lost. This includes insulating the outside of the foundation with polystyrene or polyurethane sheets. In our area, the maximum frost depth is four feet so this depth should be insulated.

GLAZING

I suggest that only the south wall of the structure should be glazed. The north, east, and west walls are framed and insulated to obtain an R value of 20. Many do not agree with eliminating the east and west glazing surfaces. However, consider that these sides receive less than one third of the total radiation, are often buffeted by prevailing winds, and lose more heat through glazing than they gain—then make your own decision. Since the insulated walls will not store heat, they should be either painted with glossy light-coloured paint or covered by a suspended curtain of aluminium foil. This acts as a reflector. In the case of the north wall, it will reflect any radiation which has escaped the solar collectors.

Glazing is the frosting on the greenhouse cake. There are many types including glass, acrylic, fiberglass, vinyl, mylar, tedlar, polyethylene, and teflon. In most cases your pocketbook will dictate your choice. Glass is the best but is expensive and heavy. My choice is flat greenhouse fiberglass on the outside of 2 x 6 studding and six mil. polyethylene (with an ultraviolet inhibitor) stapled to the inside of the framing. A five and a half inch dead air space is created by double glazing. This gives the walls a resistance to heat conduction but does not interfere with the incoming energy flow. Some owners are even experimenting with triple glazing. It remains to be seen if the extra cost and work is justified. After the glazing is completed, an extra effort should be made to seal all heat leaks with insulation, caulking, or weatherstripping.

The greatest heat loss protection is gained by providing some method of sealing the glazed surface from the cold night air. The exterior reflective south panels might be made of insulating materials and mounted on hinges to double as shutters. Insulating blankets could be thrown over the surface and tied. Tight fitting curtains could be hung on the inside. Polystyrene sheets may be clipped to the inside studding. Whatever is used, be sure that the method is quick and easy. You will use it many times.

BACK-UP HEAT

All these precautions should insure a successful winter greenhouse, provided there is an average amount of sun. What happens if the sun does not shine for three weeks? It is not shame to have a back-up heat source readily available. With an attached greenhouse, a window might be left open to let some house heat escape into the greenhouse—since the structure is well insulated it amounts to not much more than heating another room. A free-standing greenhouse should be equipped with a small wood or oil stove...just in case.

A solar greenhouse is practical in most parts of Canada. If you are thinking of "a little greenhouse", seriously compare this ecologically-sound oddball to a traditional energy-inefficient greenhouse. You might find that there is no comparison.

— NL —

NATURAL LIFE'S ENVIRONMENTAL ACTION KIT NO. 1 -- HERBICIDES

Aerial spraying of Phenoxy herbicides has become a major environmental problem.

Drift from these toxic weed-killing sprays contaminates food crops and directly injures unwary people in its wake.

Our 8 page booklet:
*describes the dangers
provides background knowledge
shows what to do if your property
is sprayed*

\$1.00 from Natural Life Magazine, Jarvis, Ont.

ACCESS

WASTE DISPOSAL IDEAS

A sixteen page booklet called *Above-Ground Use of Greywater* is a good source of info about all aspects of grey-water (waste water from all household appliances except the toilet) re-use. It summarizes biological and chemical research that has been done and discusses modification of laws to allow grey-water re-use. Originally a technical paper prepared by Peter Warshall for the California State Government, it is abundantly illustrated and quite useful. Cost is \$2.00 each.

To cover the rest of the waste disposal situation, there is a publication called *Drum Privy Guidelines*. It gives instructions and suggestions for the construction of a low cost drum compost privy. Costs — \$1.00 each.

CONTACT

CoEvolution Quarterly
Box 428
Sausalito, Ca., 94965 USA

THE COMPOST TOILET NEWS

This newsletter of the Alternative Waste Treatment Association carries many stories of design and construction of all kinds of compost privies. Lots of problem-solving, resources and plans. Cost was \$4.00 for four issues last time we checked.

CONTACT

Alternative Waste Treatment Assoc.
Star Rte. 3
Bath, Me., 04530. USA.

EVERYTHING YOU WANTED TO KNOW ABOUT NUCLEAR POWER

Energy Probe's newest booklet on nuclear power is called *Everything You Wanted To Know About Nuclear Power (but were afraid to find out!)*. It's a winner! First run printing is almost sold out, and a second printing will surely be too.

It outlines some of the problems involved with nuclear power in an enjoyable, yet understandable and authoritative way. It explodes some of the myths used to promote nuclear energy and answers the questions that are often asked on the subject. There is also a good resource section on how to find out more about this complex issue. It sells for \$1.00.

CONTACT

Energy Probe
43 Queens Park Cres. E.
Toronto, Ont., M5S 2C3



ANOTHER ANTI-NUCLEAR GROUP

A group in Thunder Bay Ontario is putting much energy into the nuclear energy problem. They need donations and new members. The group, called "The Citizens Committee Studying Nuclear Waste with Environment North" can provide speakers to any group able to organize a meeting time and place.

CONTACT

Environment North
214 Arthur St. No. 12
Thunder Bay "P" Ontario. P7B 1A6
(807) 344-1680 or 622-7524

METHANE GENERATOR FOR A HOMESITE

A homesite methane power unit represents a technology that is human centered, survival-oriented and adaptable to a wide variety of situations. On essence, it is a system that processes human, pet and livestock manures, other animal products and vegetable matter into an easy-to-handle compost, while also producing a gas useful as a fuel or heat source. The resultant gas can be used in cooking stoves, hot water heaters, and to power internal combustion engines.

A book called *A Homesite Power Unit: Methane Generator* by Les Auerbach describes how such a generator can be designed and built using a tank for the basic component — an anerobic (without oxygen) digester.

Although the book is unfortunately short on illustrations, it describes well the theory and process of building the system.

The spiral bound, fifty page book is available from the author/publisher for \$5.00 (US) plus forty cents postage and handling.

CONTACT

Alternative Energy Systems
Les Averbach
242 Copse Rd.
Madison, Ct., 06443, USA

SOLPLAN 2

A few issues ago we reported on a publication from Vancouver called Solplan which features seventeen solar house designs. Now Solplan 2 is hot off the press and designed as a companion to the first publication.

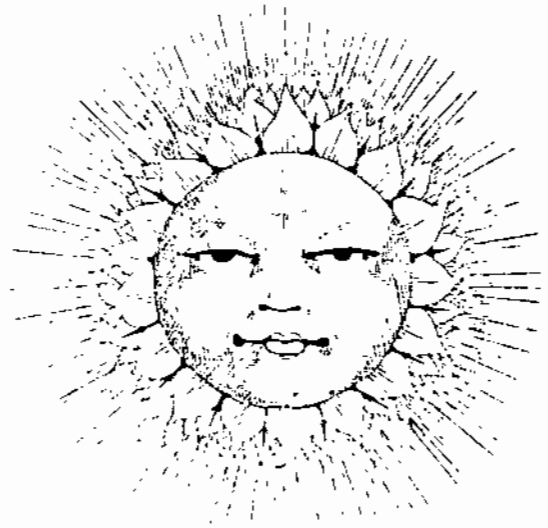
Solplan 2 has its emphasis on ways to utilize solar energy in existing houses. There are step-by-step worksheets for calculating present house heat requirements, passive solar heat gains, and the evaluation of the solar potential of a site. Elements which can be added to a house to allow it to use solar energy to the fullest degree are described. A solar house conversion example is given, as is a description of basic solar domestic hot water heating systems.

Anyone considering the possibility of retrofitting an existing building to solar heat will find Solplan 2 extremely useful. Solplan 2 costs \$3.00 plus 50 cents for postage and handling. (Solplan 1 is \$2.00 plus 25 cents).

CONTACT

Drawing-Room Graphic Services Ltd.
Box 86627
North Vancouver, B.C., V7L 4L2

THE BAKAVI QUESTION



by Mike Nickerson, author of the book, *CHANGE THE WORLD, I WANT TO STAY ON.....*

It is time for a decision.

The guiding principles by which our society currently develops itself were devised in an era when the activities of people had little impact on the life of the planet. The principles of specialization, mechanization, mass production and expansion of productive capacity have been maintained because they have made society powerful, and in particular, they make the people controlling them powerful. The problem arises now that our civilization has grown in size and strength to this point, that we are significantly altering the life process of our planet and are threatening the very foundation of our basic survival.

If we are to avoid an intolerable situation, it is necessary that there be a clear acknowledgment of the change in the circumstances of human life on earth, and that an appropriate change be made in our guiding principles.

In 1971 a project was started under the name of the Institute for the Study of Cultural Evolution. The project was to study the problems facing our society, and the solutions that people had conceived for dealing with them. After much travel, talk and study it became evident that there was a lot of similarity in what people were seeing and in the conclusions they drew from their observations. The specific focus of individuals ranged from environmental concerns and conflict over finite resources to human potential. Overall, a pattern emerged which was not peculiar to any specific location, but was being recognized simultaneously in many different places.

The study mentioned above was summarized into what could be termed *guiding principles*. They start off by stating that it is necessary to develop an ecologically sound way of supporting human life—that is, one in which materials are managed in continuing cycles, and in which the energy necessary to advance those cycles is taken from continuously reliable sources.

Since a way of living that values the accumulation and increased consumption of material goods puts enormous strains on resource supplies and often has toxic side-effects, the alternative of encouraging life-based pursuits is recommended. These would include interpersonal relations, creativity, co-ordination, appreciation and spiritual, intellectual and psychic development.

Unlike material growth by which people are competing for limited resources, life-based pursuits allow people possibilities limited only by their interest in exploring them. Rather than limiting someone else's growth by taking materials that they would like to use, a person progressing in the development of his or her human potential is able to help others to do the same.

Even if we concentrate all our desire to grow on our human potentials, we will still need to eat and to provide shelter, basic tools and utensils. While providing these necessary material goods, it is desirable that we work to develop technologies which do not:

1. require a continual input of nonrenewable resources.
2. have a cumulatively degrading effect on the environment.
3. require more material than would be available if the world's resources were equitably distributed amongst the world's people.

Having defined these principles, it seemed a good idea to choose a word which could refer to them as a single framework. The word *bakavi* (ba-ka-vee) was chosen from the language of the Hopi people because it referred to a component that made survival possible for a portion of their population in a time of crisis. Their situation then was much like ours today. The civilization had grown so big and powerful that most of the people were totally caught up by structures of human origin. Without adequate contact with the natural world, it was abused through ignorance; for the Hopi in that age the abuse led to catastrophe.

For us at this time the outcome depends on whether or not we can learn from the experience of others or from the understanding derived by various individuals studying our current situation.

The Bakavi Question is asking whether or not the people with whom we share the future agree that we need to develop our society within the Bakavi guidelines. Do you agree? If you agree, you are agreeing with hundreds of others who have stated as much. If we ask the question widely enough we will find that there are thousands and potentially millions of people who share our view. It is agreement on that scale which will make it possible to re-establish the priorities on which our society is based.

When people are asked the Bakavi Question they usually receive it in one of three ways. If they have not paid attention to the issue before, the question provides an introduction. When they are asked directly by another person or hear that it is backed by enough people and organizations to be taken seriously, the question can start them thinking. It is important not to push for an answer but to let the thought process take its course; at a later time the answer will be ready.

There are other people who already have a feeling that there is something wrong with the way society is working now, and that a better way exists. For such people, the presentation of the Bakavi guidelines can bring their feeling to the conscious level and enable them to act willfully with their understanding.

Finally there are people who have been consciously aware of the issues involved for some time. They often wonder what is the point of stating the obvious. For them, agreement is a statement of solidarity which provides a foundation for co-operation. The foundation is often already assumed, but through agreement it can be confirmed and expanded. For these people Bakavi is a device which they can use to help raise the awareness of a larger population, without whom the change cannot take place.

Many of the people who share this agreement may be members of sympathetic organizations. It would be helpful for them to see if there is a consensus within the membership. If you are such a person and you find that your organization agrees, ask the members to consider joining in the effort to pose the question to a broader public. The more people who join in asking the question, the more seriously it will be taken. And is it not a serious matter? Does our survival not depend on this change of priorities?

Let us assume that history and public education have progressed to the point that the Bakavi option is understood by most of the population and that reason prevails. This would result in a mandate for change. What sort of actions, legislations or other moves on the level of the whole society could be taken to bring about the change? This is an important question. If you have any ideas, please send them to the address at the end of this article. We can call the ideas "planks", and if we collect enough planks we can build a platform. If the response is as good as the potential of the people reading this article, we will endeavor to reproduce the ideas in a later issue.

In the meantime there is an immediate possibility for us to use our mutual agreement with Bakavi to form relationships which will be beneficial on whatever level we care to act.

The first field of action is our own personal behaviour. We can look at the various things that we do and the ways in which our basic needs are provided for. To what extent do they fall within the Bakavi guidelines? Agreement with Bakavi generally implies a desire to live in that manner, but our will is often opposed by habits, customs and the basic structure of the settlements in which we find ourselves. Association with people who share our concern can reinforce our will to live appropriately.

When a number of people get together with this common goal, it becomes possible to organize study and project groups, to take on local issues, and to work for improvement of specific situations. Often there are organizations existing which are already dealing with such issues.

Use of the Bakavi Question would provide them with a means of finding others who share the concern but need a way to apply themselves. Some people in small groups are inclined to pool their resources and set up intentional communities which they can design with their ideals in mind and not have to go through the long process of changing already existing trends.

To be free of the dangers of our present system it will be necessary for a significant portion of the population to support the will to change. This will require considerable education and organization. The Bakavi Question is useful both in presenting the issue and in finding our allies. The origin of this article provides the service of referring people who write in stating their agreement to others from their own areas who have done the same.

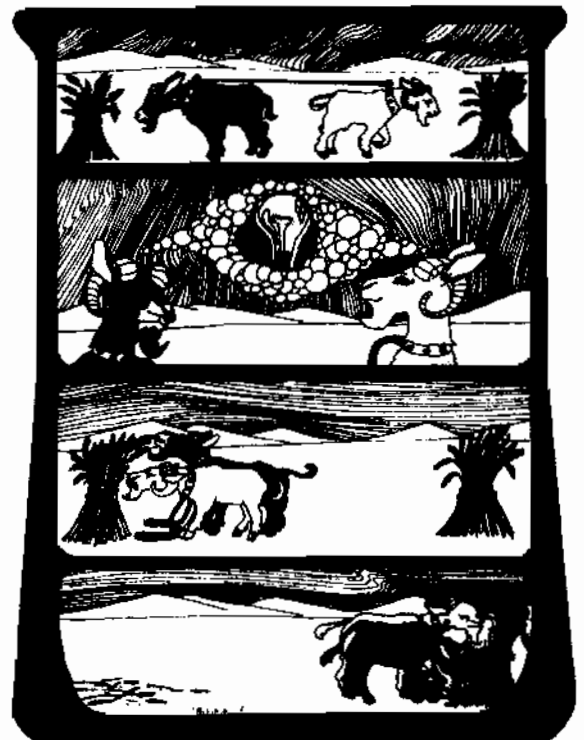
Since people respond more readily to an address near to them, you are encouraged to reproduce the Bakavi Question and to distribute it in your area using a local address. There are designs for flyers and cards which you could adopt for your area or which we could provide with your local address for the cost of printing and mailing them to you. Where such initiative is taken we would then refer people who contact us to the new association that is formed. Try and get to know the people in your area and see how you can apply yourself in the community with which you are familiar. As surely as any other, your home is proceeding into the future.

If many voices in many different areas express their common concern, then perhaps the decision will be made to meet the future willfully rather than drifting into it in confusion.

—NL—

CONTACT

Bakavi
P.O. Box 2011
Station D
Ottawa Ontario



SEARCHING FOR COMMUNITY

by Lynne Spaulding
High Level, Alberta

I'm a member of a small nuclear family, and I don't like it! It's too demanding and too limiting. I haven't enough privacy and I feel lonely. There's lots of rewarding work to do, but the sense of urgency about the jobs takes the pleasure out of them. There are too many big decisions to make all by ourselves. Time for relating with friends, the earth, myself is doled out in stingy parcels. We're just as fragmented on the farm as in the factory.

Soon, I'm hoping all this will end. I'll belong to a larger family then—a community. We'll be coming together fearfully, excitedly, for many reasons, but all looking for wholeness, knowing deeply that what Sherry Thomas wrote is true: *"The real work of the people (in a community) is not in the garden, rather in building respect and trust, in changing patterns of 'mine' and 'yours', entrenched since infancy, in exploding the limits of possibility."* (from an article entitled "Surviving the Country Fantasy")

We never meant to be alone. When we came to Canada seven years ago, we had a vague and hazy dream. Five and a half years of living on our farm have sharpened it to a vital need. The streams of curious visitors and hungry travellers who sat at our table made us recognize our aloneness all the more.

Being the first of our kind to settle in this area of Alberta, we were met with understandable hostility by the local people. They'd heard of these city hippies who invaded peaceful rural neighborhoods and disrupted the equilibrium by blatantly engaging in subversive and immoral acts. We had to prove we were hardworking, sincere folks just trying to create a decent life for ourselves.

All we've succeeded in doing is in becoming the local zoo, or museum, providing gossip topics for miles around. For instance, when I drove forty miles to buy a hay rake for our team of Belgians, the guy looked at me skeptically. "You folks're still there, eh? We were talking about you last night, wondering how you ever lasted this long."

After we bought our quarter section, many new groups began to trickle in, first stopping to ask us if we knew of



Photo by Don Reid, High Level, Alberta

any land. They weren't interested in our ad in *Mother Earth News* asking for partners; what they wanted was their own piece. Now, a fair number of couples are attempting to grope their existence out of the clay soils of northern Alberta, to live simply and rely on consumerism as little as possible. To us, it was again becoming a land of rugged individuals whose faces changed every season. The place began to seem hostile to all we ever dreamed of doing.

So, last summer, we sold our farm and moved to begin a new search for people, place and a community to join. During the hot, dry months we chased wisps of hope and followed well-intentioned leads. We left behind the solid work and deeper vision of that other bit of earth, wrenching ourselves out of the present and into the future. It was frightening.

It was more frightening when we saw little evidence of the cheap land and great network of B.C. communes we'd heard of. A

friend had been writing letters to us for five years that filled us with longing for the kind of life she'd been living. We visited the mecca of communities expecting a lot more than we found.

Many of the "communities" consisted of divorced or separated couples living with their new partners at opposite ends of their land in silent truce. Or else there were groups of three or four living on some guy from California's land—"It's cool. He only comes up for a week or two during hunting season."

Where were the gardens and the goats? The signs of work or permanence? We found none. There was lots of amiable nudity and sharing food in the sun, but this sort of transient love could neither feed nor shelter us.

It was a learning trip, and we were lucky. A discouraged phone call "home" informed us that the buyers couldn't come up with the money and the farm was still ours! Back we came, but with new and wiser eyes. There was no perfect place, and at least this was paid for.

Besides, the land provides well for us. Every winter

"I long for a sense of belonging.....a deepened quality of connecting with myself, with others, with earth and her aura. Community can provide the context for this expansion."

the root cellar is full of food—vegetables, apples, berries, herbs from the gardens, orchards and fields we've planted. Our homemade dehydrator has made it possible to even have rhubarb in the cold months.

The goats give us butter, cheese, milk, and the colourful chickens lay just enough eggs. Although we haven't grown our own grain yet, we've been able to trade our yearly surplus of hay for all the feed we need for our animals and us. Water is plentiful, also. The hand-dug well provides delicious water by the bucketsful. For washing we use rain, snow or the dugout pond. And after a sweat bath, we can plunge into the icy Wapiti River.

The work has been good and we've learned much from it. Renovating the old log cabin, building chicken houses and goat barns, creating beautiful, sturdy furniture, sawing the firewood, recycling old clothes into quilts, rugs, and new ones—all this has brought us satisfaction in our own competence. It's shown us that we were right. We can live comfortably and simply more or less outside the consumer society. Nothing is wasted. Even though we sold the team of horses when we "moved", the big two story log barn we built with their help will make a perfect workshop for our future community.

Yet I feel a sense of loss. One small family isn't an efficient unit, and much energy is squandered. I think of all the duplication of efforts in our separate households. When half the working team has to leave the job to cook a meal or tend to the children, the other member can't get much haying done. And it's too easy to work ourselves into a mindless exhaustion, racing to beat the storm clouds.

As long as we're unnaturally cordoned off into groups of two adults and our offspring, we get tunnel vision, thinking the material survival of the small "us" is the means and end to fulfillment. It isn't so! Though the crafts and work have been bittersweet, they've been in a vacuum, out of context of a larger reality. They haven't been enough in themselves to help us reach the human and spiritual goals we've set. For any of it to have meaning we need other people.

Though we were the first back-to-the-landers to arrive, there are others around now. None of them have seemed interested in sharing, however, and I've had little in common with them. Then, all of a sudden, they began to talk about community and how good it is. I learned that their definition is entirely different from mine. It had something to do with helping each other out when they were in trouble and seeing each other at social gatherings. Since everyone lives at least ten miles from the next one, it means a lot of driving is necessary. It was all a mystery to me until last summer when I went to one of the parties.

What a listless bunch! The volleyball game seemed perfunctory, and the talk was polite. People disinterestedly asked each other about their gardens or their building projects just as their city counterparts in pantsuits and hair spray sipped cocktails and compared notes on the stock market. I began to realize why all these "close friends" limited community to weekends—they couldn't relate to each other. Connections between people were missing entirely. They slid past and around each other like greased watermelons in a pool.

A community provides an environment within which to make deeper relationships. We can be vulnerable to each other and learn to cooperate, peeling away the edges of our defenses. Maybe these others were afraid of losing something, but I believe the gains would far outweigh the pain in sloughing off a lifetime of accumulated psychic debris. It may be the only way to become whole.

I've experienced this intimacy with my closest friends. It's hard work. We've been supportive, touched on raw nerves, sparked changes, but it has been limited. They've all been city women, Special Times Friends, not every day ones. I long for the continuity I believe is possible within an extended family. Work, play, school, celebration as a continuous process in daily life would give us time to be private, and corresponding time to be really with whomever we're with. Much relating can be done during shared action.

This continuity is important for our children, also. By interacting with a group of caring adults and children beyond the narrow confines of their immediate families, they can grow and make choices that matter. I only know so much, and I'm moody, and arbitrary. I'm more than a parent, and some days I just don't feel like being one at all. When there are others around to share the sometimes burden, I'm able to fulfill my own needs without anyone else feeling neglected.

The brief periods of harmony that I've experienced with other people have shown me that community is a viable solution. Now I want to set down roots more than anything! When we put ourselves somewhere with other people and have to look deeply at each other, it's got to be a beginning.

I yearn for a sense of belonging.....a deepened quality of connecting with myself, with others, with earth and her aura. I want to get in touch with that which is beyond my senses, my spirituality, and begin to experience the fullness of life directly. Community can provide the context for this expansion. Only together can we explore that void we all feel. It's too scary to try it alone.

We don't have any guides we believe in. Maybe that's why so many pop gurus get rich—people don't want to be responsible for their own search. The Masters fill their mouths with tried and true phrases, as if the uttering of another person's vision words can take the place of personal revelation.

We can move to our farms, join political collectives, practice meditation, yoga and fasting, but more is needed. It used to be for many tribes of native peoples that while summer was the work demanding time of the year, winter was the spiritual half.

We don't have a time set aside for these other things. "Complex ceremonies, rituals, songs, poetic actions and community involvement marked the season." (from Akwesasne Notes Newspaper) During these months the young were welcomed into the group and people were reminded of their metaphysical roles. Commitments were renewed, continuity reaffirmed. The communities of tribal people weren't organized to progress, but to be. The ability to be is absent in our culture.

Even the ecology movement has no spiritual base. How can they save the earth without first having a relationship with her? This lack is what keeps us all apart.

Nowadays it's simply stylish to wear your jeans patched and talk about organic gardens and pollution. Twenty years ago it would have been motorcycles, leather and laughing at the squares. Ten years ago it was dope, dirt, flowers and mocking the straight folk. Now it's tipis, peasant blouses, overalls and poking fun at the uptight city dudes and redneck farmers, loggers, oil riggers and construction workers.

What will come after the eventual building of the cabin and planting of the garden? Once self-sufficiency is achieved and all the homesteading skills are under control, what's going to keep us from settling down into that routine all farmers know about? Without long range goals and a guiding vision, how will we be any different from the local hayseeds we ridicule and criticize so freely? what's so alternative about such a way of life?

The country newcomers I know seem to have no basic purpose in choosing their particular lifestyle. Without a larger set of values all it comes down to is style. They seem to be attracted to the country living scene like a fly to fly-paper. It was waiting for them when they got out of school. They didn't choose it; it choose them. The people are out of gear. And I've felt out of place for a long, long time.

I'm ready for commitment right now. I can hardly wait. But why has it been so hard to find partners? Maybe people are afraid of community because they don't feel confidence in themselves yet. Without a strong self image, they're threatened by others, and they fear being steamrollered. I know that's been my problem in the past. I've scared people away by being TOO sure of how things should be, while deep down inside I was afraid if I didn't do all the talking, someone else would get us started on wrong paths. I was intensely threatened by individuals who acted like they had it all together.

Now I feel I can live peacefully with anyone who also has chosen me. I'm not afraid of losing myself to them. It makes me infinitely flexible and open to new growth. Freed from the rigidity of fear, I'm ready for everything.

It hasn't just been my fault that we've been alone. The long term commitment that's necessary, especially during the traumatic trial period when every detail seems to be a crisis, turns people off. In our culture, transience is synonymous with freedom. It's easier to drift along the commune circuit being dissatisfied with all those imperfect models than to stick around and try to work things through.

That's another problem—work. Living in the country is hard work. You have to regulate yourself to do it, and you have to like it or it won't get done. Many people found after an hour of haying that maybe they liked the city better after all. The romantic dream didn't fit with shovelling manure—not just ONCE, but damned near endlessly!

Besides this confusion of media images, I've found fragmentation to be the biggest obstacle to getting any concrete partners together. There are lots of single issue radicals around: bio-dynamic gardeners who protect wild-life but don't like "kids", as if they're a disagreeable species; feminists not in tune with the natural world; back-to-the-landers who are in regular competitive deathly relationships with each other; political activists who treat their own bodies badly. No wonder no one trusts anyone else! Because our paths are too narrow, the different goals seem to be in conflict.

People get defensive. That old debate...Revolution vs. Alternative Lifestyles...is still raging in some circles. "My trip is more political than your trip," they cry. But I don't think a person can begin to be effective in any larger sense until she or he is approaching a wholeness of vision and awareness that encompasses all categories of earth's goodness and her problems.

And while the city activists have been calling us escapists, others feel we're too political. We recently received a letter from an old friend who feels we've irrevocably grown apart. "My journeys," he wrote, "have been internal during the recent years. It seems that while your lives may have changed in similar respects, it is also true that your struggles are very rebellious, or political."

Perhaps they are. But why should that be divisive? There are so many ways possible. The word "political" used to mean much more than it does today. Derived from the Greek, it meant any interaction between a person and another person, or a person and the world, that effects change. I like that definition. It encompasses so many of our different growth struggles.

But the changing comes in fits and starts. We have no families, history or mythology that we believe in. Though we've broken from a destructive, unhealthy way of life, we've had to start fresh with no one to guide us, no one to do it with, no common ground. (I just thought of that old John Lennon song: "How can I go forward when I don't know which way I'm facing?") We're afraid to take that first step toward sharing and cooperation. Even the simple thing of educating our own children frightens people off!

I wish it wouldn't be so hard to be friends. And whenever a commune does make it, it seems to be relevant enough to rate big spreads in glossy magazines. This importance comes from the very scarceness of communities.

My partner, Tim, wails, "I wish there were MORE communities, so they'd seem ordinary. Then we wouldn't have to go into it as daring adventurers, freaks looking for a haven, oddballs who can't make it like normal people, or showoffs. I want to be able to assume a way of living naturally that varied peoples of the world have lived for untold years."



Photo by Don Reid, High Level, Alberta

HOW TO FORECAST WEATHER COUNTRY - STYLE

W

hat will tomorrow's weather be like? If you're like most people, you depend on your local weather service to answer that question. Sometimes the weather forecaster's predictions turn out all wrong, and we wring our hands, wondering why modern technology hasn't made us mortals more weatherwise.

At such times we tend to look upon the weather forecaster as "someone with whom the weather does not always agree." If forecasting is so unpredictable, perhaps you could do better yourself. Maybe you should consider taking up country-style weather watching, a natural way of anticipating Mother Nature's highs and lows, wet and dry spells. For years, rural folk have been prying into Nature's secrets to pick up clues enabling them to predict daily and seasonal weather patterns. Keeping a watchful eye on the sky, staying in touch with that feeling in your bones, and studying animal behaviour are some of the ways by which you can become your own weather forecaster.



There's more than a trace of truth to such sayings as "red sky at night, sailor's delight...red sky at morning, sailor's take warning." Moon gazing is another means of finding out if tomorrow's weather will be fair or foul. A ring around the moon is a sign that rain may be on its way. Cirrus clouds carrying tiny particles of moisture scatter the light from the moon causing the ring or halo effect.

About that feeling in your bones, aches and pains are more noticeable before a storm. Pressure building up around sore bones and teeth that are bad enables some sensitive people to predict that a storm will hit within twelve

by Edward R. Walsh
Westbury, New York

illustrations by Ed McCabe
Stockbridge, Massachusetts

hours or so. Scientists explain the phenomenon this way: tiny charges of electricity known as ions are always present in the atmosphere. Negative ions are good; positive ions are bad for us. Lowering atmospheric pressure produces a rush of positive ions, and some experts blame them for the physical and emotional ills associated with a falling barometer.

Dr. H. E. Landberg, president of the American Institute of Medical Climatology, adds to that theory. Even though ions cannot penetrate into closed interiors, electro-magnetic waves can and do. Rapid pressure changes are often associated with cold fronts, squall lines and thunderstorms that usher in changes in the electro-magnetic field. Some people are sensitive to such changes, explains Dr. Landberg.

"Even a storm fifty or one hundred miles away can have enough of an electrical field to make susceptible people sense it and react." The reaction depends on your makeup. Some become agitated or anxious under such conditions; others may develop migraine headaches or simply get drowsy. It seems those with nervous dispositions are more likely to be affected.

Besides studying the sky and noting signals your body sends out, keep a weather eye on insect and animal behaviour. They have a clear way of showing you what will be happening weather-wise. For example, have you ever counted the stripes on a woolly bear? These hairy caterpillars that later turn into tiger moths can forecast the kind of winter we're in for. When wide brown bands appear on their coats in the fall, look forward to a mild winter. But should the bands be narrow, better break out the heavy overcoats and stock up on shovels and snow shoes.

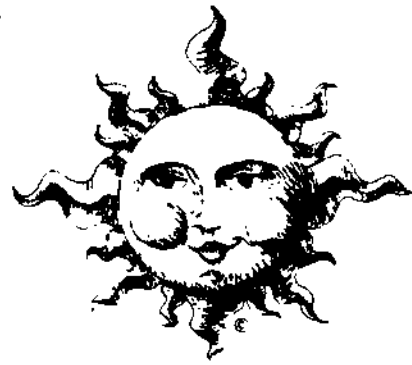
Spiders, on the other hand, can be good summer-time guides for making daily forecasts. That patient spider spinning its silver web in the shrubbery will tell you if raincoat, rubbers and umbrellas should be toted about. A spider web glistening with morning dew is a certain sign you'll soon feel sunshine on your shoulder. Dew forms when the ground cools off at night as moisture from the air condenses and covers exposed surfaces with water. If low clouds keep the ground warmer than usual, no dew drops will collect. This may mean a storm's heading your way.

Another way to predict precipitation is to listen to the frogs. Since moisture irritates their skins, they tend to croak more before it rains. Bats flying low is another sign that wet weather is on its way. They stay close to the ground because their very sensitive ears cannot tolerate the pressure which drops in advance of a storm system moving in.

Crickets can't tell you if tomorrow will be fair or foul, but they can clue you in on the temperature. You can get an approximate idea of how hot it is by paying close attention to a chirping cricket. Listen for fourteen seconds, then add forty to the number of chirps. Say that you count forty-five chirps; that tells you it's about eighty-five degrees Fahrenheit. The hotter it gets, the more the crickets chirp out in protest, so to speak.

The residents of Roseburg, Oregon, don't rely on spiders, frogs or crickets to forecast weather. They have their goats. When wild goats move toward the top of Mt.

Nebo, people know the day will be fair. But when the goats huddle near the bottom of the slope, they're certain rain is on its way. So reliable is the behaviour of the goat herd that Radio Station KRSB in Roseburg gives two daily weather reports: one from the U.S. Weather Service, the other from the folks who watch the mountain goats.



Human behaviour is equally predictable. As the saying goes, everyone talks about the weather but nobody does anything about it. Country-style weather forecasting won't help you change the weather, but it will make you more knowledgeable when you talk about what's likely to happen.

Like death and taxes, weather predictions will always be with us. Making Mother Nature the source of your forecasts might make you a mite more weather-wise than those who know only what they read in their daily newspaper. Country-style forecasters know that nobody fools Mother Nature.

-NL-

ORIENTATION



As my confession is supposed to have a therapeutic effect, let me bare all.

A decade ago we purchased what was to be our final home. We were so enamoured with the overall effect that we were totally blinded to a series of drawbacks with which we have had to live since. In addition, as you will see, we created some of our own. We can only hope that what follows will be a stern warning to all Natural Life readers to look before they leap and think before they act.

We were no sooner moved in, unpacked and free to breathe than we realized that we had purchased a lovely home on the wrong side of the street. Most of the window and door openings were on the north leaving us no opportunity to accept passive heat from the sun, as well as more light in winter. Next we noted the fireplace lacked a heat-illator, more calories lost. There was no porch at the front to act as an airlock when the door was opened to accept the north-west winds. Even the front storm door opened to deflect cold air into the living room.

Spring came and immediately we were aware that of the seven fine big maples that had won our hearts the fall before, all but one were casting long shadows into the area we wanted for fruit, vegetables and a mini orchard. The intermediate owner (we were the third since the house had been built) had thoughtfully, but also thoughtlessly added three new trees. One was far too close to one of the big maples and had to be removed shortly after we took over. It would also have shaded the area we had earmarked for small fruit. Would you believe it — the other two had been planted, one directly under the incoming hydro line and the other under the telephone line. Cheers.

You might have thought that was enough but with a deep love of flowering crabs, we thoughtlessly planted five on the west side of the garden. Just about the time they were beginning to put on a fine show in the spring, we had

to face the fact that they were shading the garden and the problem would worsen. We ended up cutting down all but one. Chalk up another minus.

At the south we planted a hedge of laurel leaf willow and to the north our row of grapes for future juice, jelly and jam. In no time at all the hedge was screening the grapes and slowing their rate of ripening. So we have had to cut the hedge back to the ground, let it start afresh and keep it drastically trimmed.

Dwarf trees like kittens grow up into cats and having thoughtlessly planted our rhubarb and currants between the trees when they were young, we had to dig them up and move them.

We could go on but this should alert you to the need for preplanning. Were we to start from scratch on a small holding, we would never plant trees that grow to the size of maples, much as we love them. The prevailing winds would be studied in anticipation of avoiding a driveway filled with snow. To make best use of the land, shade-tolerant plants like begonias, impatiens plants, currants, gooseberries and ground cover plants would be in areas close to trees. In the garden, so that all things could have maximum sun for early growth, the raspberry canes would be at the north followed by the corn and so on. The name of the game is sun-trapping. If we had to accept a lot on the south side of an east-west road, we would toss convention to the winds and have the back of the house to the north, and crowd as much of our window opening as possible to the south and south west, not forgetting that there is nothing nicer than a kitchen at the south-east to enjoy the early morning sun. All our intermediate plantings of shrubs would also be arranged so as not to shade future flower-beds.

Sunshine is free. Trap every bit you can.

GP

SOIL FERTILITY

PART 2: CLIMATIC INFLUENCE

by Joe Smillie
Weedon, Quebec

The fields of Eastern Canada were once all forests. The high rainfall of the Northeast promotes leaching; that is the washing out of minerals from the soil. The growth of the woods was nature's solution to this problem.

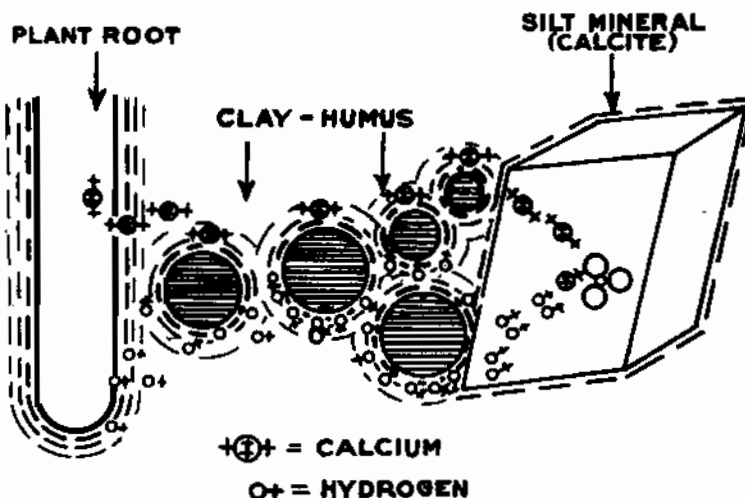
Forest is climax cellulose (carbohydrate) growth. In this way minerals are stored for long periods of time and also break down very slowly. This careful storage and recycling of nutrients was necessary in the North East to preserve hard won fertility. On the prairies of North America, the breadbasket of the world, the climax vegetation was high protein grass. The plains once supported millions of hefty bison while the eastern forest maintained a few thousand deer and wild fowl. Agriculture in eastern Canada will never be as productive as that of the mid-west. There are many reasons for this, but it is mostly a question of climate and soil fertility.

Protein rich crops are produced only in a healthy, mineral laden soil while carbohydrate materials emerge from a soil with poor mineral and humus content. The forests created a topography that recycled all minerals and checked erosion. The permanent grasslands did not have to contend with the leaching process of the humid areas and built up a ready storehouse of nutrients. Even the most careful farming practices destroy the natural covering, often cause erosion, and promote leaching. The cutting of forests and the ploughing up of the grasslands created North American agriculture which all too often resembles a soil mining operation. The protein content of Mid-West grains has dropped from seventeen to seven percent. Our modern farming methods have to be modified before the natural fertility of the soil is totally depleted. We should not allow the soil to return to forest and permanent grassland but we must learn how nature creates and preserves fertility on a large scale.

NATURE'S WAY

Soil minerals make up only four percent of the plant's nutrients but they are essential to the make-up of all plant cells and all plant processes including photosynthesis. Minerals originate in parent rock being broken down by physical weathering and biological action. If these minerals were contained in the soil solution that exists between the particles of soil aggregates, they would soon be lost to the sea by the steady drainage process of the hydrological cycle. Nature, however, is not wasteful and only grudgingly allows this loss to occur. In order to prevent leaching, minerals are stored in the soil by bonding to organic matter. Some, particularly phosphorous, form complex substances but most are held by soil colloids. Clay and humus are termed colloids because of their small particle

size yet large surface area. They behave like a jelly in water and do not drop out of suspension. These colloids have a negative electrical charge and attract positively charged mineral particles. The smallest unit of mineral is labelled an ion; or specifically an atom with a charge. Calcium (Ca), Magnesium (Mg), Potassium (K), Sodium (Na) and many



trace elements are positively charged and hence called cations (cat-ions). These minerals are held to the colloids like metal filings to a magnet. This electrical bonding is called adsorption. The colloids thus store these cations allowing their loss only gradually. If there is too little colloidal storage capacity or an excess of cations the surplus is quickly lost. Most cations are bases; that is alkaline or acid neutralizing in their reaction. Hydrogen is an acid cation. PH is a logarithmic measure of the quantity of hydrogen active in the soil.

When a plant root comes into contact with a soil colloid the plant's energy causes an exchange of cations between the root hairs and the colloid. Minerals move from an area of high concentration on the colloid into an area of low concentration in the plant root. The plant absorbs these base minerals in exchange for its respiration wastes particularly hydrogen. The colloid accepts this hydrogen on an exchange site recently vacated by the base mineral. The plant actually 'chooses' what nutrients it wants. Different minerals are held on different sites and as hydrogen replaces the bases, the soil tests as more acid. It is not the acidity but the lack of base nutrients that creates infertility. This cation exchange is nature's method of plant feeding — buffet style, not intravenous. The cation exchange capacity (C.E.C.) is a measure of the soil's ability to store nutrients

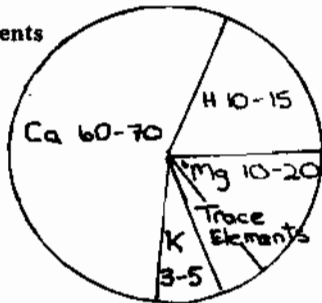
and make them available to plants on demand. This ability depends on the quantity and quality of the clay and humus in the soil. Humus has a much larger capacity (or exchange sites) but is not as plentiful as clay.

Many different elements are present at exchange sites with the bases hopefully predominating. The term 'base saturation' is a measure or percentage of the various base minerals on the soil colloid.

THE ALBRECHT FORMULA

The person who best explained the chemistry of plant feeding was William A. Albrecht. He was an early student of nature, his youth spent on an Illinois farm. After years of laboratory work, research papers and the chairmanship of the Soil Department at the University of Missouri, Albrecht still attributed his technical understanding of the soil to his earlier visions of the natural process. In a 1939 experiment he added amounts of colloidal clay to a quartz sand simulating the makeup of the soil. He also added varying amounts of Ca, Mg, K, H, and trace elements to different soil mixtures to observe the effect of various ratios on the growth of plants. Along with this lab experience he attempted to balance experimental plots using base mineral inputs. He discovered that the base saturation of the soil should be:

- 60-70% Calcium
- 10-20% Magnesium
- 2-5% Potassium
- 10-15% Hydrogen
- circal 5% Trace Elements



Although this figure varies slightly according to crop requirements and soil conditions it is the formula used by almost all soil labs as the optimal mineral balance. The soils C.E.C. and base saturation can be measured in an intensive soil test known as soil audit. This test also measures the soils content of organic matter and important elements. It shows what is present and what is needed. On the inorganic side it can give a rough idea of the mineral supplement necessary to create an optimal balance. This depends on the soil's capacity to utilize this addition. The percentage figures are translated into pounds per acre so that an agriculturalist can apply the appropriate amount necessary to satisfy the mineral needs of the soil. Mineral balance is essential to the healthy functioning of metabolic cycles of the soil life forms.

INSOLUBLE YET AVAILABLE

Albrecht never lost sight of the reason for exploring the technical intricacies of soil chemistry. He continually noted the results of poor soil on animal fertility. He knew that calves licked whitewash off their pen walls to obtain the calcium and magnesium lacking in their feed. He also compared the dental records of service enlistees to soil maps and found tooth decay rampant in the records of men from low calcium soils. He determined that pine needles decay slowly not because of high resin content but because their lack of calcium makes them unappealing to soil micro-

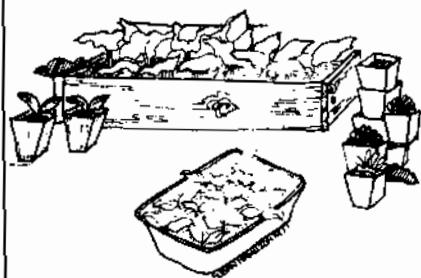
organisms. He championed the cause of calcium as "the major plant food". He showed by experiment that limestone is necessary primarily for its calcium content not its acid neutralizing effect. Other acid neutralizing substances did not improve plant growth. There is a very complex relationship between PH and soil fertility but Albrecht showed that a truly fertile soil has to be slightly acid (6.3-6.5 in the Northeast).

Soil laboratories specializing in C.E.C. still agree that from ten to twenty-five percent of hydrogen is necessary. Hydrogen is an active element necessary for mineral flow in a healthy soil. The title of an Albrecht paper — *Insoluble Yet Available* shows that this plant feeding theory ran afoul of the accepted dogma of the time. Artificial fertilizers are based on the rule that plants take their minerals from the soil solution. It has long been accepted as a fertilizer law that for a mineral to be absorbed it has to be soluble. Albrecht explained that although minerals can be absorbed from a water solution into the plant it is primarily a transpirational rather than feeding process. The plant draws up water from the soil in order to manufacture new cells and to evaporate off to control its temperature. It is in this flow that soluble minerals are absorbed. When early experiments showed this, it was accepted as the natural feeding process.

By using this transpirational stream to feed plants, modern farming is in essence short circuiting many of nature's safety mechanisms. Some soluble fertilizers are easily leached while others revert to complex insoluble forms only hours after application. Artificial fertilizers do not kill earthworms but their acidulated quality is harmful to soil life and they "burn up" humus. These negative effects break the cycle of fertility and create the need for even more soluble fertilizers to replace the complex feeding process of the soil. This vicious spiral ends only with the creation of a mineral lacking yet infertile hydroponic solution where once was fertile soil. Artificial fertilizers can be used during transition periods but continued use is addictive and dangerous. The slow release of organic soil amendments like rock powders enables soil micro-organisms and soil colloids to feed the plants balanced nutrients when the plants desire them. A goal of soil fertility is the stocking of exchange sites on the colloids with the proper ratio of cation minerals. Nitrogen, a gas not a mineral, is provided by bacteria and stored in organic matter. Phosphorous, (an anion or negatively charged particle) is a complex mineral that becomes available only under fertile soil conditions.

There are literally thousands of variables controlling the plant feeding system. Any explanation of this miracle is bound to be an enormous simplification. A full understanding of the love of the colloid for the root has not emerged from the soil labs as yet. One can, however, have a productive soil without knowing the details of soil chemistry. Many wise farmers of centuries past didn't know their cation exchange capacity. They learned that the key to plant and animal health was soil fertility. By simulating nature's method in creating humus and providing powdered rocks man can create and preserve a living soil. To a modern scientist it is termed a bio-colloidal viewpoint while to others it is "just plain natural". Natural is hardly a synonym for simple. Soil productivity depends on the innate capacity of the soil, the balancing of mineral content and the management of organic matter. There are many methods of soil management both traditional and innovative but they all rest on the golden rule "Feed the Soil Not the Plants". Nature is wiser than man when it comes to plant needs.

CONSERVATION GARDENING & FARMING™



Rateaver Responds
©1978 by Bargyla Rateaver, Ph.D

Q. Is there any raspberry supplied in Canada which can be trimmed to the ground, as you suggested, instead of being tied up each season-end as is usually done?

A. Yes, Lowden's Better Plants and Seeds, Box 10, Ancaster, Ontario L9G 3L3, has Heritage, a red raspberry which he cuts to the ground each year-end. The new growth in spring bears berries in fall, so he gets only a fall crop each year, from the Heritage. However, he points out that he expects that eventually all raspberries will be handled that way — one crop, on current year's growth, and everything cut to the ground each fall. He seems to be very knowledgeable about fruit crops, and has high quality material.

Q. Is there any way to grow potatoes during the winter months? Even in a greenhouse there is limited space for such a crop which takes a large bed.

A. That is true, so it behooves the gardener to make the most of what space is being used, and to grow the most potatoes in the soil available. One way is to use the basement, with enough lights. I cannot tell you if this is economical for you, but home-grown potatoes do not have black centers or diseased spots or soggy texture, if the method and soil are correct. One can erect a wire fencing cylinder, line it with Sisalcraft paper, and fill it with soil. One must be sure to get this particular St. Regis paper, which is not quite the same as ordinary tar roofing paper. Soil fill should be much lightened with perlite or vermiculite. If concrete reinforcing wire is used, seven feet high, the volume of soil will be great and it needs to be lightweight. Adding seaweed meal and ground comfrey leaves (dried) along with manure and other nutritious materials will insure good growth. One could substitute seaweed from the beach, or green-

sand, and just any weedy, green material to get acidity (which prevents scab). Leafmold is fine, and peat moss, if cheap enough, helps too. Then the potatoes to be planted should preferably be whole, and soaked twenty-four hours in liquid Maxicrop before planting. I have a recent letter from a lady who grew only a short row of potatoes, but got over one hundred pounds, and is ecstatic because she knows it was due to soaking in Maxicrop first.

If one had only one light source, one might set the cylinder onto a lazy Susan and be able to rotate the whole thing. The best way to plant potatoes in this cylinder is to make slits at intervals, cutting a U shape, lifting the flap so formed and pushing it inward. If the potatoes to be planted are too large for such openings, they must be planted layer by layer as the cylinder is filled with soil. Small potatoes or seed can be pushed into the soil beneath the flap. Watering from the top, preferably by drip, is the only way. For harvesting, the entire cylinder is opened and the contents turned out onto a tarp. After replenishment of nutrients, the whole thing can be used again. Of course, the same thing can be done in a greenhouse, where light hits from all sides.

Q. Is there any real remedy for gophers, something that really works?

A. The gopher trap has been used for many years, but it does take some skill in setting. There is a magnetic device, but it costs nearly a thousand dollars. Someone in an audience told me that he had had perfect results — no more gophers ever — by putting Ex-Lax down the holes.

Q. What is the best remedy for nematodes?

A. There are many kinds of nematodes, and not all attack the same plants. Growing French (strong-odored) marigolds thickly, like a cover crop, for two years, will get rid of some. Growing mustard helps fight potato nematode. For turf nematodes, using two hundred pounds of seaweed meal per acre will help. Using two pounds soluble seaweed powder per acre as a leaf spray or on soil has helped with citrus nematode and may work for others. A friend who had bad nematode trouble loaded his soil with seaweed from the beach and in two years had much success.

Q. Are there any French journals in the general area of organic gardening and healthful living?

A. Yes, the Intl. Federation of Organ-

ic Agriculture Movements (IFOAM) puts out its newsletter in French and German as well as English. The French movement has its *Nature et Progrès* (53, rue de Vaugirard, 75006 Paris), and there is a bulletin, *Jardin & Santé* (41, quai des Mânes-Blanches, St. Cyr-sur-Loire, 37100 Tours). The Quebec center is *Mouvement pour l'agriculture Biologique*, 340 Willowdale, Suite 2, Montreal H3T 1G7.

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Comfrey Report and Herbal Healer, Hills All data plus alphabetized case histories on medical uses. This book free with any 3 books. \$5.50

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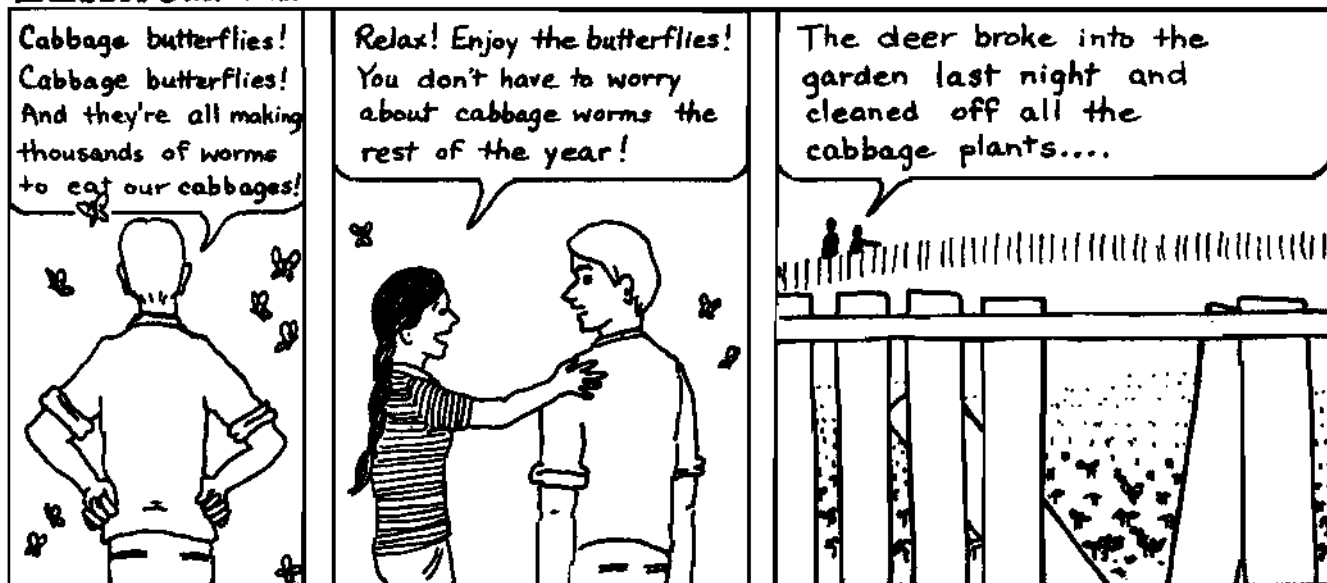


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LEAH OF THE BEVAN 78



KEEPING DEER OUT OF THE GARDEN

by Geoff Bowman
Sooke, B.C.

It's a hot summer morning and you decide over breakfast that the Swiss chard is big enough to thin out. Thinking of that evening's lightly steamed cooking greens, and maybe soon freezing some of the spinach for mid-winter, you go out to the garden to discover: both spinach and chard are gone! Well, not gone — there are a few plants untouched here and there, but stems are all that's left of the others. Looking around you find damage in other rows, but it's a rare thing for any plant to be eaten down to within a couple of inches of the soil (or mulch) surface — and in a recently dug transplanting bed are the telltale tracks: two half-moons facing each other, anywhere from one and a half to four inches long and about two-thirds as wide. You've had deer in your garden, and you can expect them back.

KNOW YOUR OPPONENT

Deer are resident wild grazing animals, attracted to gardens in many rural areas; in our part of the world (southern Vancouver Island B.C.) no other insect or animal pest, except cows, can damage so many vegetables so quickly. But even suburbanites can find themselves growing a

larder for deer who have "moved in" from wilder areas, preferring surroundings where the population is dense enough to prohibit most hunting but substantial woods or woodlots exist to provide sleeping and breeding grounds.

If space permits and things are quiet, deer will move in a feeding circle — in others words, they will leave one of their customary sleeping places towards dusk and browse along a rough circle (which may be five miles or more in circumference) back toward this or another daytime "bed-room." A group of deer will alter this feeding circle, and may abandon it altogether for seasonal reasons or because of a scare, but will usually return to it again with a sometimes foolish stubbornness. If you're irrigating in dry weather, or if your garden is in the moon's shade on a bright night, or if you're gone for several days at a stretch, you could be encouraging deer to alter their route to include your garden — and once they've added it to their habitual rounds, they'll be doubly hard to discourage. Obviously the time to repel deer is at the first sign of damage.

There's not much that can be said about their food

"...tastes vary from deer to individual deer. We had a neighbour barely a half mile away bothered by deer whose favourite food was onions, but 'our' deer never touched onions even after wiping out their chosen favourites: cabbage, tops of root crops, and seeds in a pod (beans, peas, radishes, etc.)"

preferences except in a very general way, because tastes vary from individual deer to individual deer. We had a neighbour barely a half mile away bothered by deer whose favourite food, he assured us, was onions, but "our" deer never touched onions even after wiping out their chosen favourites: Cabbage-family plants, tops of root crops, and seeds in a pod (peas, beans, radishes, etc.). If you can figure out the (usually fairly narrow) tastes of your deer, you should find there are some crops you won't need to protect at all: We have tomatoes, rhubarb, mint and garlic growing in an area deer can (and do) walk through. You may even find out that you're being bothered not by an entire band of deer but by one troublesome individual in that band that's acquired a taste for cultivated vegetation!



SPOILING THEIR APPETITES

Feed stores and seed houses may offer one or more brands of deer repellent (usually based on thiram, which *cannot* be used on the edible parts of a plant). We've never used this kind of repellent, but there are several homemade ways of making deer feel like dining elsewhere, which will of course have varying success with different bands of deer: Closest to the chemical approach is to sprinkle mothballs on the ground around and pathways to your garden. Deer, like many grazers, avoid certain areas because of smells on the ground — but the effectiveness of this will be (like the commercial repellents) irregular if the deer can't get lots of food otherwise.

Our own best repellent is cayenne pepper on the deer's favourites, especially at exposed row-ends. The cayenne should be replenished after a good rain, and all watering done at ground level — or for better adhesion, moisten the leaves first with a solution of a tablespoon or two of liquid soap in a gallon of water and sprinkle the pepper on before the leaves are dry. And don't forget to wash any greens you'll be eating!

Deer won't approach your garden if you fool them into thinking a deer has been killed by dogs there. Make the rounds of barbers and beauty parlors (or ask your local barber to save several weeks of sweepings) and get as much cut-off human hair as you can sprinkle around your vegetables. At the same time, hang small bags of dried blood (a slaughtering byproduct; the processed bloodmeal sold as fertilizer is an inferior substitute) on stakes throughout and around the garden, and dampen these bags as often as they become dry.

TAKING THE INITIATIVE

The aim in repelling deer is to convince them you have nothing worth eating, but you can also keep them away by pretending your house is a center for their natural enemies. In areas with considerable human population, deer have only two remaining "natural" enemies, hunters, and dogs, who will "run" deer. (Two or more dogs band

together to "run" a deer by chasing it until the animal is too exhausted to run further, whereupon the dogs usually kill and sometimes eat it. They can do this at any season, if anything more easily in spring when does are pregnant and smaller game scarce — and if the deer escape, they can die easily of overexertion and exposure in the next couple of days. If your dog returns home completely worn-out and with mud on his chest and legs, or if he vomits masses of short coarse hair, he probably has been running deer, and should either be kept home by fence or leash (or given to someone in an area without deer).

A subsistence gardener can justify keeping a dog (or, if bears are a problem digging up carrots or breaking into food storage areas) for his usefulness in keeping deer at a distance. Remember he doesn't have to *catch* the deer, because the scare value of his barking will be more than enough for most deer. Of course your garden guard ought to spend the night near the plants you want protected, not curled up at the foot of your bed!

If, like us, you'd rather not have a barking dog on your country place, you can still "hunt" deer away. It won't do much good to actually hunt deer, because there's a rapid and effective grapevine among deer to spread the news of the season's opening. And generally you'll find hunting season is the time rural gardens are most free of deer troubles. But if a band of deer finds your garden, for several weeks you can pretend to be a hunter: go out on garden patrols several times a night (with a bright flashlight) and the first thing in the morning, cursing or praying according to your temperament, and on the latest night trip set off a few cheap firecrackers on the garden approaches. Though this is a time-consuming remedy, you may well convince the deer you intend to shoot them and divert the whole band to calmer pastures.

THE SIMPLEST SOLUTION: FENCING

A single-minded combination of the above methods should enable you to eat your vegetables, but you may come to wish that you didn't have to take so much time to maintain your garden's safety. The final solution to a deer problem is fencing them out. The only drawback to this solution is the fact that deer can jump seven feet, squeeze through a vertical space a foot wide, and wiggle through a chest-high horizontal space not too much wider — or rather, the does can. Although a fence at human eye height will keep out almost any deer unless food is scarce or he's startled into jumping it, the fence around our thirty-five by fifty foot gardenplot is about as high as a six-footer can easily reach.

The easiest way to build a high fence is to build a lightweight one. Wasted cedar tops from logging slash-piles provided us with light nine-foot poles tapering from six inches to two inches diameter. We set these ten or twelve feet apart in two-foot-deep narrow holes. We didn't treat the posts, but set them thick end down and braced them at corners with 2x4 scrap; with a slender fencepost, creosoting is not so important as choice of wood species "tough" in contact with soil (eg. cedar, tamarack, oak, locust). From post-top to post-top, and again at ground level, we attached single-strand 9-gauge galvanized fence wire with barbwire staples. At the government fishing wharf, we paid \$20 for enough secondhand fourteen-foot-wide fishing net to surround the garden. To attach it,

I threaded the lower wire through the net, stapled the net up one post, tied its strands at regular intervals to the upper wire and, stretching the net, stapled it to the next post. To complete the fence I pegged the bottom wire to the ground and surrounded it on the outside with one width of eighteen inch chickenwire as a rabbitproofing.

Consider what animals other than deer you might want to fence out too. We haven't kept goats and have very few raccoons nearby, so can't say whether either of these would chew their way through a net, but would recommend that a salty net be well soaked and rinsed before use. If you have to keep cows out too, you might want to space the posts closer and add an extra strand or two of fence wire at cow height, on the outside of the fence.

If on the other hand, deer are the only animal to be kept out, there are some things deer see as a fence which really aren't. For example, the topmost two or three feet of a fishnet fence may be replaced by two or three strong

white cords, as deer will hardly ever jump against something above their eye level if they can see it — which is quite convenient if the only netting you can find is a foot or two too narrow. And if you need the quickest fence you can make, string two cords (one at the height of a deer's chest, the other at neck level) around your garden and hang on them any noisemakers (bells, tin can tops, pieces of glass) you can scrounge — this has a good chance of, at best, fooling them for a while.

Whereas the deer repellents are either temporarily or generally effective, a good fence will protect your vegetables for years with minimum attention. Although we'd rather not see a fence around our garden at all, the deer (who still walk by the back door or under the bedroom window some evenings) have had for three years to limit their snacking to occasional flowering plants or blackberry leaves — and that's well worth the trouble!

— NL —

ACCESS

INSECT PESTS OF ALBERTA

Alberta has a reference handbook on insect pests. Designed especially for farmers, home gardeners, nurserymen, greenhouse operators and professional pest control specialists, *Insect Pests of Alberta* was written by Hugh Philip, head of the entomology section of Alberta Agriculture's plant industry laboratory, in response to numerous requests for such a book.

There are estimated to be about 25,000 species of insects in Alberta, of which only 8,000 have been identified. *Insect Pests of Alberta* covers those insects which Mr. Philip considers to be the most common and/or economically significant. In his book he describes the adult and immature stages of each insect covered in the book and gives a brief description of the food hosts and the type of damage the insects cause. The photographs were chosen on the basis of their value in helping the reader to recognize the various insects and the characteristic damage they do.

The book does not contain control recommendations. It costs \$4.75.

CONTACT

University of Alberta Bookstore
Student Union Building, 114 Street and 89 Avenue
Edmonton, Alberta T6G 2J7

SMALL SCALE AGRICULTURE PLANS

Someone once asked us if we knew where to find a device for hulling seeds and nuts. Well, we've located some plans for a ground nut huller. It can be run by animal, pedal or electric power and is made of scrap motor vehicle parts. The illustrated instructions are easy to use. 10 page pamphlet costs \$1.25 (US).

It is produced by VITA (Volunteers in Technical Assistance) — a US development association that supplies mail order information to people around the world seeking help with technical problems in the areas of agriculture and food, renewable energy sources, shelter, water supply and small industries.

VITA's technical experts design small-scale agricultural implements and renewable energy equipment. A catalogue of the how-to publications for these items describing is available on request. Here is a very brief list of the booklets available.

Savonius Rotor Construction \$3.25

Solar Cooker Construction Manual \$2.25

Low Cost Development of Small Water Power Sites \$2.95

Simple furniture Design \$1.25

Technical Bulletins on Building a Grain Mill are also available.

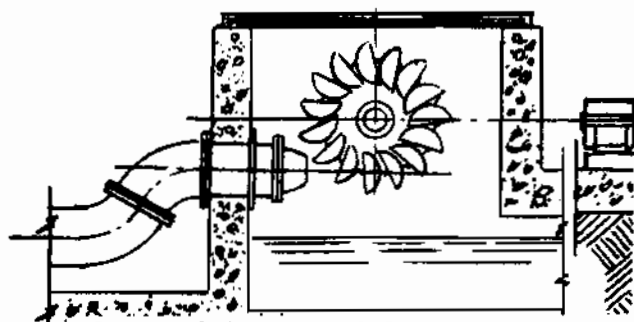
All these prices are in US dollars, cash with order. Specify language (some are available in English, Spanish, and French).

CONTACT

VITA

3706 Rhode Island Ave.

Mt. Ranier, Maryland, USA, 20822



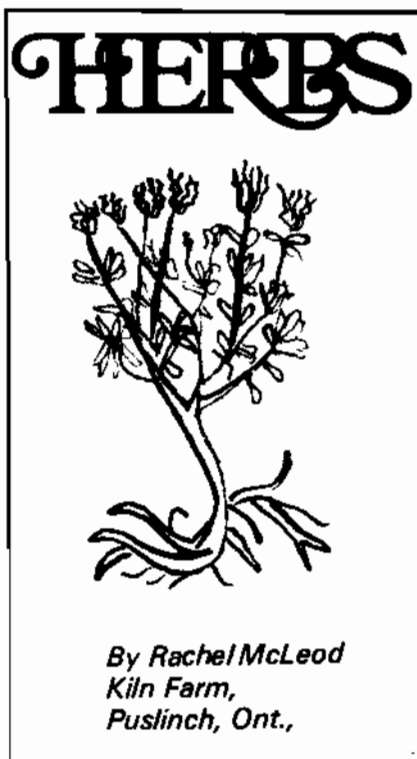
SAWMILLS

This publication is an attempt to provide small sawmill operators and communities with information necessary to establish, operate and maintain a small sawmill. Some of the topics discussed: capital resources for establishing a sawmill; set up and maintenance; evaluating finished product and troubleshooting.

Photographs and line drawings help explain the various intricacies of a sawmill to ensure safe, efficient operation. 32 pages, available free of charge.

CONTACT

Manitoba Dept. of Renewable Resources
Box 22, 1495 St. James St.,
Winnipeg, Manitoba, R3H 0W9



"Peter was not very well during the evening. His mother put him to bed and made some chamomile tea and she gave a dose of it to Peter! One tablespoonful to be taken at bedtime."
(From *The Tale of Peter Rabbit* by Beatrix Potter.)

No doubt Peter Rabbit was suffering from indigestion and exhaustion after his adventures in Mr. McGregor's garden and his mother well knew that chamomile tea would not only soothe his nerves and help settle his stomach, but would also send him to sleep as it is a soporific. Perhaps a tablespoon is enough for a young rabbit but we would need more and a cup before bedtime is a pleasant and comforting nightcap.

Chamomile is only one of the many herbs which are used as teas. All herb teas are delicately flavoured and carry with them the taste and fragrances of the herb garden even if they are served in the depths of winter. Using a herb as a tea is one of the best ways of appreciating its full taste and aroma and its effect on you. Some herbs will refresh you, and others relax; some help an uneasy digestion and others will make you sleepy. A herb tea may not act as quickly as an aspirin but it is much safer and works in harmony with your body.

The true herb tea or tisane is made from one or more herbs. They can be made from fresh or dried leaves, petals, seeds or sometimes grated roots.

As the herb flavour is very delicate, the tea should be made in earthenware, china, porcelain or glass rather than metal. I keep two teapots, one glass and one porcelain which are used exclusively for herb teas. A strainer is also needed. The shallow metal ones do the job but I infinitely prefer a Japanese bamboo one which is about two inches deep and holds all the herb leaves without difficulty.

To make the herb tea, first warm the tea pot and place the herbs, fresh or dried, in it. Pour boiling water over the herbs and leave to steep about eight minutes. The tea can be made as weak or as strong as is desired by altering the amount of leaves. Some herbs such as lemon verbena, rosemary and angelica are concentrated and only a few leaves are needed for quite a strong flavour. Others such as lemon balm are more delicate and larger bunches may be needed.

The quantity of the herb varies with the plant but a general rule is one teaspoonful of the dried herb per cup and two teaspoons of fresh herbs. Milk should not be used, but honey as a sweetener and a slice of lemon may bring out the flavour.

Everyone has their favourite herb teas and many books will recommend different combinations, also many interesting blends are found in the stores. It is however a good idea to take time and try each individual herb then blend them together to make your own special mixture. We find a blend of lemon balm, orange mint and a few angelica leaves is very popular.

Most of the time herb teas are enjoyed for their flavour and fragrance but they are also one of the best ways of absorbing the healthful qualities of the herbs and some knowledge of their effects is helpful.

I have already mentioned chamomile which is one of the most widely used and popular teas. Not only is it soothing for digestive upsets and insomnia but it is also a mouthwash and a gargle. Equally good for some of the same purposes is sage. Sage will cure a queasy stomach and heal a sore throat or bring relief to mouth ulcers.

Peppermint is probably one of the most popular flavours, we meet it in candy, tooth paste, cough lozenges and as a flavour to medicines. The genuine peppermint tea is a most refreshing drink and will rejuvenate you at the end of a long day. All the mints make very pleasant teas and a

teaspoon of mint in a regular cup of tea is a good way to introduce someone to the joys of the tisane. However, mint teas should not be drunk to the exclusion of any other herb as they have been known to cause indigestion if taken in too large quantities...once a day is perfectly safe. Try them iced, too, on a hot summer's day, they are delicious.

Another good tea to try is rosehip tea. This is often mixed with hibiscus flowers which give a lemony flavour. Rosehips are good for the kidneys and a rich source of vitamin C.

One of my favourite teas is made from elderflowers. It is a very delicately flavoured tea and if dried blossoms are used it is important to collect and dry them carefully. The umbels should be picked just as the small flowers are opening and laid on a screen to dry. If they are dried at the right time, they will be a creamy white; however it is all too easy to be late, in which case the flowers will turn brown and the pleasant flavour will be lost.

Another good and healthful tea is bergamot (*Monarda didyma*) which is relaxing and may act as a mild soporific...both the leaves and the red flowers can be used.

There are many herbs which help asthma, bronchitis, coughs and colds. Teas made from elder flowers, coltsfoot leaves or mullein flowers all will give relief for bronchial conditions. In fact, coltsfoot is one of the main ingredients of herbal tobacco, and I met a party of senior citizens who told me how they used to roll mullein leaves and smoke them when they were boys, apparently without any serious effects.

-NL-

BOOKS.....

We've recently found two good herb books. *THE HERB BUYER'S GUIDE* by Richard Heffern (Jove paperback) is a great reference. It has names and addresses of growers, brokers, wholesalers and retailers around the world. Various specialty products are discussed such as Bach remedies and Edgar Cayce formulas. Foreign, exotic and unusual herbal specialties are listed and there's an extensive guide to ginseng.

CULPEPER'S HERBAL REMEDIES (Wilshire Book Company) is a recent adaptation of Nicholas Culpeper's 17th century herbal instructions. A large number of the herbs are in use today and this book shows how and when to use them for medicinal purposes.

ACCESS

HOOK N' COOK

Someone in the Manitoba government is doing some original thinking—they've produced a series of pamphlets entitled *Hook n' Cook*. The emphasis in these publications is on uses of so-called "trash fish" such as catfish, silver bass, burbot, suckers and bullheads. Each pamphlet discusses catching and preparing one of these fish.

Two very useful parts of the series describe building a home smoker and canning fish. Free to Manitobans. Write for out-of-province prices.

CONTACT

Dept. of Renewable Resources
and Transportation Services
Box 22
Winnipeg, Manitoba, R3H 0W9

GUIDE TO FOOD ADDITIVES

Health and Welfare Canada, as part of its Operation Lifestyle Program has produced a booklet about food additives which is a mixed blessing. It is designed, not only to inform consumers what additives are used and why, but also "to alleviate some of the concerns that consumers may have regarding the safety and necessity of food additives." But if you can pass by the pages of propaganda that make the food processing industry happy, there is some useful information.

Various types of additives are discussed such as starch modifying agents, pH adjusting agents, sequestering agents and so on. Along with a discussion of why and how these add-

INGREDIENTS: SUGAR (MAY ALSO CONTAIN DEXTROSE), CORN DEXTRIN, VEGETABLE OIL SHORTENING, CITRIC ACID, TRICALCIUM PHOSPHATE, TRISODIUM CITRATE, NATURAL LEMON FLAVOUR, FOOD COLOUR, VITAMIN C (214 mg PER 100 g), CALCIUM OXIDE.

INGREDIENTS: viande de bœuf, viande de porc, amidon, sel, levure et protéines végétales hydrolysées, caramel, assaisonnement et acide citrique.

itives are used, are examples of the chemicals and of the foods in which they are used. It is available free on request.

CONTACT

Educational Services
Health Protection Branch
Ministry of National Health & Welfare
Ottawa, Ontario

FRUIT RECIPES

B.C. Tree Fruits Ltd. publishes a number of recipe pamphlets and booklets using such local fruits as apples, pears, peaches and cherries.

There are a number of free pamphlets which will be mailed on request, including one about home drying of fruits. A sixteen page *Home Preserving Guide* (which includes the leaflet *Canning Without Sugar*), and an apple recipe booklet are also available for 25 cents for each order.

CONTACT

Recipes
B.C. Tree Fruits Ltd.
Kelowna, B.C., V1Y 7N6

HOME CANNING

A free publication is available from Canada Department of Agriculture called *Home Canning of Fruits and Vegetables*.

It discusses in detail the various processes used to can fruits and vegetables (tin cans and glass sealers, cold pack, hot pack, pressure canners, boiling water bath, sugar syrup, raw canning, dry canning, blanching). It is a good introduction to the subject—not for the person who has done it all before. For instance, there is no information on preserving with honey—just traditional basics.

CONTACT

Information Division
Canada Dept. of Agriculture
Ottawa, Ont., K1A 0C7

FOOD COMBINING CHARTS

Two 17 in. x 26 in. wall charts—one called *Simple Food Combining*, and the other *Protein Complementing*—are good aids to nutritious eating. Both of the charts are very detailed and present a wealth of information in an organized and extremely usable format.

Protein complementing is necessary to produce complete usable protein in non-meat diets, and food combining works on the principle that the limitations of our digestive enzymes can be overcome by proper combinations of foods, thus preventing allergies, protecting against poisoning, and enhancing nutrition. Each chart costs \$2.75 (US).

CONTACT

ASLAN Enterprises
Box 1858
Boulder, CO, 80306, USA

TWO NEW RECIPE BOOKS PUBLISHED

This seems to be the time of the year when cookbooks are published—and we've received our share for review lately. Here are two of the best.

Garden Way has put together a great new *Zucchini Cookbook* authored by Nancy C. Ralston and Marynor Jordon. It seems impossible to have too many of this prolific vegetable—there's bread, pickles, soup, cakes, casseroles, and spreads—all using zucchini. Harvesting, preserving, storing and cooking are all described. Even the ink is green in this book!

Douglas & McIntyre, a Canadian

publisher, has just released a book called *Snackers—Kick the Junk Food Habit* by Jim & Maureen Wallace. The authors warn parents of the dangers of sugar snack foods and go into much detail providing an argument to this effect as well as alternatives. Combined with this are two hundred and thirty kid-tested and easy-to-prepare recipes made from wholesome, natural ingredients. The recipes cover pies, cakes, cookies, puddings, candy, drinks, munchy snacks, and breads—good snacking for kids of every age.



BUY A FREEZER?

The controversy over freezer ownership is one that is unlikely to terminate unless a drastic change takes place to bring in some new miracle insulation material that will cut down power consumption.

At the moment the consensus seems to be that freezers are a convenience item in a consumer oriented society, rather than a big saver of dollars. UNLESS almost everything that goes into the freezer is home grown. In fact they well may be a trap to entice you into highly uneconomical foods plans. The big freezer owned by one of my friends was a bad buy even though bought as a bargain, as it more often stands three-quarters empty or houses the overflow of friends.

Uppermost in everyone's mind must be the question of power or unit failure. As I have had experience in both cases, let's look at these two possibilities first. Manufacturers and the Dept. of Agriculture tell us a good freezer can hold its food for up to forty-eight hours, provided we leave the lid closed. I assume the upright would be a bit less efficient than the cheaper and less convenient cabinet model. We know from experience that when the power went off once for a full forty-six hours after an ice-storm we lost none of our food.

Unit failure can be a nightmare if you have a quantity of meat stored. It is not just the unholy mess of cleanup, which is bad enough, but there is the fact that most liners today are plastic and absorb the odour from the rotting meat.

Government bulletins and instructions accompanying new freezers give us all we need to know about time limits and methods. These should be read carefully and digested. It stands to reason that whether it is a package of chops, a bag of berries, or a container of frozen carrots, if the optimum time for storage has passed, we do not automatically have to cart these dated packages to the garbage can. We have on occasion eaten our own fresh frozen berries a good three months beyond the optimum storage time. People's

tastebuds vary, and in our case we seem to detect greater deterioration in flavour of greens like asparagus and beet tops or chard than we do with a carry-over of raspberries or strawberries.

One trap we got into was attempting to freeze unblanched parsnips. We reasoned that if Mother Nature could freeze them in the ground without damage, so could our freezer. It just is not so.

You will also have to face the fact that some things freeze better than others. We feel that carrots and beets, for instance, never quite come up to the standard of frozen cauliflower or green peas.

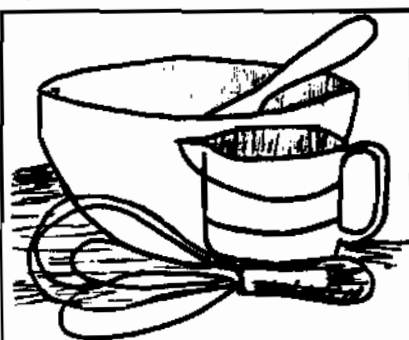
In general, we feel that fruit, with the exception of pears, pays off really well. Peaches and apples will need a bit of ascorbic acid as will fresh apricots. If we are in a hurry we will pit and freeze plums, and also freeze red currants and black currants for later processing into jam or jelly as the case might be. We often put prune plums in small bags and then thaw and stew them for a delicious dessert.

Such things as berries and tomatoes fast frozen on trays and then bagged may look a bit nicer at a later date, but we find with a medium-sized freezer this adds to the bulk and does not pay off in any added flavour. Some of our friends freeze their tomatoes whole with the skins on. We find that we can work more economically by cutting up imperfect fruit and freezing in bulk.

We make good use of our unit, too, by freezing casserole dishes, chili con carne, etc.

As far as is humanly possible we attempt to get our garden produce picked, washed and blanched in minimal time and stewed away to get optimum flavour. This pays. We would even be bold enough to suggest that people who tend to be lacking in the ability to develop a rigid system for freezer management should think twice about such an investment unless they are willing to pay a big premium for convenience.

GP



Eating Naturally

by Bernadine Roslyn

Carol Rumney of London, Ontario sends us this idea for using lentils. It makes a very tasty side dish or relish.

Lentil Salad

Peel 1 cooking onion, stick in 2 cloves. Cook onion with: 1 bay leaf, 1 teaspoon salt, 1 cup lentils, 4 cups water, uncovered, for forty minutes. Drain off the liquid (into your soup pot). Discard onion and bay leaf. Peel and dice 1 onion. Add: 5 tablespoons oil, ¼ teaspoon pepper, ½ teaspoon salt, 3 tablespoons red wine vinegar (or use white if you like). Chill.

Sam Bogdan of Qu'Appelle, Saskatchewan wrote a lovely long letter but unfortunately I just haven't space in this column to pass all his suggestions on to you. Here, though, is his recipe for vegetable patties. They're an excellent dish to prepare ahead for quick meals.

Vegetable Patties

Cook equal amounts of carrots and beets. Cool and grate or "blenderize"

them, then add chopped raw onion to taste. (Sam suggests 1/3 carrot, 1/3 beet, 1/3 onion.) Let the mixture sit in a cold place (like a fridge or well) for a day or so to blend the flavours. Shape patties, sprinkle on flour or bread crumbs and fry in oil.

Another long letter came from Lois Hazen of St. John Island, Nova Scotia. She offers this quickly-made dessert idea. It is especially handy if you're already using the oven for another part of the meal.

Lemon Dessert

Beat together or blend 30 seconds:
2 egg yolks

¼ cup sugar or ½ cup honey

3 tablespoons oil

juice of 2 lemons

Beat 2 egg whites till stiff. Fold in lemon mixture. Pour into 7 inch baking dish. Place dish in a pan of hot water. Bake 1 hour or until a knife comes out clean.

Lou and Jean Vanderfeltz of Verona, Ontario have asked for instructions on making yogurt. I'm very pleased to oblige them because I think I've discovered the best method yet. Here it is.

Fresh-milk Yogurt

Heat fresh, whole cow's or goat's milk to 110 degrees F. Scalding is not necessary if the milk is fresh and clean. Add about 2 tablespoons yogurt per quart of milk. Let stand at 80 degrees to 100 degrees F. for about 8 hours. Use the warming shelf of a wood stove, a basin of warm water, an insulated box, a gas oven with pilot light, a thermos, or any warm place. Once the milk has thickened, cool it quickly so it won't get too sour and curdle. Save some of this batch to make the next one.

Yogurt made from non-instant powdered skim milk is not as tasty and a bit more complicated to make. So try to buy milk from a farmer if you have none of your own. Good-tasting yogurt can be made from powdered milk, though. Here's how I used to do it.

Powdered-milk Yogurt

To 2/3 cup non-instant powdered skim milk add 1/3 cup cold water and mix well. Add boiling water and cold water alternately as needed to give you 1 quart reconstituted milk at 110 degrees F. Add 2 tablespoons yogurt and mix. Incubate 8 - 12 hours at 100 degrees F.

Here are some further tips: Try to get a good culture. If you have a friend who has an old culture that still makes sweet-tasting yogurt. You're lucky. Cultures that have survived a long time seem to stabilize somehow and are more dependable than new ones. They make good yogurt time after time while new cultures run out after five to ten batches.

If you must purchase yogurt to use as a culture, get it at a health food store if you can. Some brands of supermarket yogurt are deficient in yogurt bacteria and will not work as a culture at all.

If you haven't a thermometer, test the milk by putting in your finger. If you can hold your finger in the milk to a slow count of 10, it is the right temperature to add the culture. Nutritionally, yogurt is one of the best foods there is. It's protein-packed and its bacteria live in the intestine and

produce B vitamins (a much tastier source of these vitamins than brewer's yeast).

Serve it plain, with fresh fruit (orange sections are especially delicious in yogurt), or with a dab of home-made jam, honey, or maple syrup.

Don't forget that we're all looking for ways to cook well without too much work. So please write and let us know if you've found a novel way to streamline your kitchen procedure. Send your letter to Bernadine Roalyn, R.R. 1, Wilno Ont.

WHAT? ME MAKE SAUSAGE WHY NOT?

GREAT SAUSAGE RECIPES AND MEAT CURING is a 227 page illustrated book written by a sausage maker for home use. The book is written in simple language and contains over 100 COMPLETE recipes. It covers smoking procedures, sausage making, brine curing meats like ham, bacon, fish, poultry and game. Also dry rub cures and dry curing (without cooking or smoking) hard salami, pepperoni etc. Also many recipes for pickling fish, brining, drying, caviar and much more. Virtually a treasure book of sausage recipes designed to be used by the homemaker, hunters, commercially and anyone raising livestock.

The Richard S. Kutas Company also offers a variety of kits for making sausage and curing meats along with cures casing equipment and other supplies. For a one time investment you can be making sausages and other tasty treats, your family and friends will rave about. **FREE** supply catalog has book price, equipment, cures, casings etc.
Richard S. Kutas Company
1667 Grand Street Dept 46
Buffalo, NY 14207

ACCESS

MIDWIFERY

With the recent growing interest in home birthing, there is a serious need for comprehensive and reliable information on pre and post natal care and birthing—both the spirituality and the mechanics.

The people at The Farm in Tennessee (a 1000-plus member community) are very experienced in delivering their own babies (over six hundred babies in seven years). The Farm also has a clinic which provides free primary health care for the community with pharmacy, lab, and ambulance.

Ina May Gaskin and the other Farm midwives authored a book in 1975 called *Spiritual Midwifery* which has recently been updated and completely revised. It has become, as well as an encouraging tale of many home births, a complete home birth manual. There is a wealth of medical information presented clearly and graphically by a team of well-experienced midwives.

A newsletter called *The Practicing Midwife* is produced by the Tennessee Farm. It was born at the First International Conference of Practicing Midwives and aims to be a forum for ideas and information from and for midwives everywhere. It also serves as a kind of clearinghouse for audio-visual material on health care and midwifery.

CONTACT

The Practicing Midwife
156 Drakes Lane
Summertown, Tn., 38483, USA

MORE MOTHERS BREASTFEEDING

An infant-feeding survey conducted by nutritionists in rural Saskatchewan shows breastfeeding is gaining, popularity, especially among first-time mothers.

The survey showed that 58 per cent of the mothers attempted to breastfeed their infants. More than half the mothers were attempting nursing first time. The percentage was slightly higher than the figures from a survey taken in 1975 by Ross Laboratories of Toronto which showed that only 51 per cent of the mothers on the prairies were breastfeeding.

More than three-quarters of the mothers encountered problems breastfeeding. The common problem was that the mothers believed they did not have enough milk. Of those who encountered problems, less than 20 per cent sought help.

VEGETARIAN MOTHERS HAVE PURER BREAST MILK THAN MEAT-EATERS

A recent report in Rodale's *Environmental Action Bulletin* caught our eye. It seems that for the past year, the U.S. Environmental Defense Fund has been conducting a study of the presence of PCB and pesticide residues in women's breast milk.

Although the data is still being tabulated, preliminary findings indicate that the breast milk of vegetarian women contains one-half to two-thirds less PCB's and pesticide residues than that of their meat-eating counterparts.

These results parallel the findings of a 1974 French study of eighteen vegetarian women who were found to have fifty to sixty percent fewer PCB's and pesticide residues in their milk than the French women who ate meat. The vegetarian women who took part in the recent American study were not necessarily eating an "organic food" diet.

VITAMIN B12

Dear Wendy:

I'm confused, and I'll tell you why. Our family is moving towards a vegan diet (no eggs or milk products) and we are concerned about the old B-12 problem. We have a book from Steven Gaskin's Farm that says you have to take a supplement because B-12 does not occur in the vegetable kingdom. If you don't, you risk serious nervous system damage. In another book we have, it has prunes, and something else as sources of B-12, while in another book it says yeast is. Another book says yeast isn't, and then in two articles (one in Natural Life) it says that comfrey is. What a pain in the ass. Besides trying to find out the truth, I'd really like to know how in heaven's name such conflicting information even exists!

We feel that Natural Life is a really honest publication, so thought it best to ask you for help. (1) What vegetarian items can you eat that really, truly have B-12? (2) How much of these goodies, prepared in what way, will give you your minimum bodily requirements?

We thought it would be good if you did an article on it in Natural Life to clear up the confusion. An article that would explain, even tell why there is such a confusion. I'm sure we're not the only poor souls. Another thing that puzzles me is that nutritional experts (Natural, that is), always say that the B complex must be ingested as an integrated whole or deficiencies will occur. Why then does B-12 always seem to occur separately from the others? If it does, how can you ingest the complex as a whole?

Wow, what a mess! I hope you can help us out. We don't want serious damage of the nervous system, but we'll get it for sure if we stay this confused!

sincerely
Sam Turton
Weymouth, Nova Scotia

FOR COMPLETE VEGETARIANS

by Margaret Nofziger, nutritionist

If you are a complete vegetarian like we are on The Farm, using no animal or dairy products at all, you will need to supplement vitamin B12 or regularly eat a food already supplemented with it. We arrived at this decision after much research and after we ourselves had our blood tested and were found to be too low without supplementation.

In nature, the source of all B12 is by synthesis of micro-organisms: bacteria, yeasts, molds, etc. (Taber's Cyclopedic Medical Dictionary defines bacteria as: "unicellular, plant-like micro-organisms lacking chlorophyll.") These micro-organisms make B12 for their own metabolism and some of them make quite a bit more than they use. Insofar as science has been able to determine, there is no B12 found in plants, produced by them. There is B12 in all animal products: meat, milk, eggs, etc. The B12 that is manufactured by drug companies is actually harvested off of micro-organisms like streptomyces griseus in the same way that penicillin

is harvested from a mold. B12 is in vitamin preparations in its 'pure crystallin form, cyanocobalamin. It doesn't matter whether it is called "organic" or "natural" or comes from a large drug manufacturer (Merck Chemical Co. discovered it in 1948)—the substance is the same: Cyanocobalamin. (Hydroxycobalamin is a longer acting but less stable compound developed by drug companies, but not readily available.) So get B12 anywhere you can, as cheap as you can.

Back to the source. There is presently no convincing scientific proof that there is any vitamin B12 in plants, and believe me, we have looked.* There are lots of rumours of vegetable B12 sources, but B12 deficiency is too serious to fool around with rumours of sources. So until there is scientific proof of a vegetable source of B12, we on The Farm choose to supplement this vitamin (as do most modern-day European Vegans), and we strongly suggest that you do the same if you eat no animal products.

Some books and some people say there is B12 in seaweed or soybeans or comfrey. These plants have been found to have traces of B12 when assayed. This B12 is probably on the plant rather than in it. Some plants have certain bacteria or molds that live on their surface (this is true for sure of soybeans and seaweed) which produce B12. The amounts of B12 on these plants is too small and too unreliable to call this a source. You wouldn't want to call this a source unless there was experimental proof that these micro-organisms produced a predictable amount of B12 on these plants always. B12 deficiency is serious, so we must make sure our sources are real and not just wishful thinking. About B12 and nutritional yeast: It is true that some yeasts and molds manufacture B12, but the nutritional yeast we eat such as *Torula* or brewer's yeast of the primary food yeast produced by *Saccharomyces cerevisiae* (the best tasting of all), does not synthesize B12. If there is B12 in these yeasts, if it is stated on their labels, it is because the manufacturer put it there to supplement the yeast. If the label does not list B12, it is not in the yeast.

Some folks feel that we can use B12 synthesized by the micro-organisms in our intestinal tract—the friendly flora that help us digest our food. Unfortunately, this source of B12 is not readily available to us. Here's why: B12 is not an independent vitamin like the rest; it has another half, produced in our stomach, which is necessary for its absorption. This other half is called Intrinsic Factor and is a stomach juice produced in the lower part of the stomach. Without Intrinsic Factor, B12 cannot be absorbed unless it is consumed in massive doses, and even then it is not reliably absorbed. Some people do not have enough or any Intrinsic Factor and these people are the ones who ordinarily get pernicious anemia. Anyway, the flora that produce some B12 occur in the ileum (the lower third portion of the small intestine) which is too far away from the stomach where the Intrinsic Factor is secreted. So, as far as we know, it is mostly unavailable to us. There are some Vegans in Europe who maintain very minimal blood levels of B12 with apparently no animal sources. Either their food is contaminated with a B12 producing mold or bacteria, or a few of them can somehow wiggle the B12 back up many feet of intestine to the site of Intrinsic Factor and absorption: the lower stomach. But others of them have shown symptoms of B12 deficiency. So again, we can't call anything a source that is not a universal source.

Here I want to talk a little about B12 deficiency. The main deficiency disease of B12 is pernicious anemia. It is really called Addison's anemia, but gets called pernicious because before they discovered Intrinsic Factor and B12, it was fatal. In pernicious anemia, the red blood cells do not mature properly. The red cells are very large (megaloblastic) and there aren't near enough of them. There is also neurological damage and degeneration of the spinal cord itself. By the time you get any noticeable symptoms such as a smooth budless, sore tongue, unexplained anemia, and general uncoordination, you are already quite sick. This is why it is important to be sure you are somehow covered for B12 if you wish to be a complete vegetarian. You can either eat a B12 supplemented nutritional yeast regularly, or take B12 tablets.

Ordinarily, the only folks who get pernicious anemia are those with a genetic lack of Intrinsic Factor or those with a lot of their stomach removed. (These people supplement Intrinsic Factor and they are fine.) Almost all other folks eat some kind of animal food: a little meat now and then, a little milk or cheese, some eggs. Unless a person has a religious conviction to eat no animal products, he is likely, no matter how poor, to eat enough animal products to keep him supplied with B12. A little goes a long way and the body stores B12, protein-bound, in the liver for long periods.

The best way to supplement B12 is to regularly eat a food already supplemented with it. We eat a type of primary food yeast fortified with B12. We also put it in our centrally produced soymilk. Most T.V.P.—Textured Vegetable Protein—is also supplemented, as are many other prepared foods. If you supplement this way, make sure you have at least one of these foods as an everyday staple. If you don't eat any fortified yeast or other food, you should take a 25 mcg. tablet on alternate days. All children past weaning should take it. Pregnant ladies and nursing mothers should take daily prenatal vitamins—they will include enough B12 for her and the baby.

Since we don't eat any animal products and are encouraging other people to do likewise, we feel an obligation to educate folks about B12 and make sure they stay healthy while pursuing their religious and humanitarian beliefs. We figure that as a creature with a conscience and a choice, we can choose to supplement B12 and spare eating animals. Available protein on this planet jumps tenfold if taken directly from the ground rather than through animals. It's the least we can do to make more to go around in a world where a third of us are starving.

**If anyone runs across any scientific study that proves to be present in any plant, please mail me a copy of the study, and if it's convincing, I'll change this statement. B12 is produced by the active bacteria in a few rare fermented foods (not yogurt). There are minute amounts of B12 in miso (a fermented salty soy paste), but you would need to eat 4 cups of miso a day to get 2 mcg.—the World Health Organization's recommended daily intake.*

Love

Margaret

Nutritionist for

The Farm

Summertown, Tennessee, 38483

VEGETARIAN WORLD

is a quarterly newspaper jammed with celebrity interviews, authoritative health articles, news on everything from world hunger to rearing vegy children. Subscription (4 issues) \$2.50 (\$3.50 Canada, U.S. funds); wholesale info available (generous terms & full credit) — just write or call us. V-World, 8235 Santa Monica Bl. #216, Los Angeles, CA 90046 or 213/654-7002.

MORE ON ...

VITAMIN B12

Here's some further information on this important subject. This article was written by Bob Pinkus who is National Coordinator of the Vegetarian Association of America. (The views expressed are his own and not necessarily those of the organization, as its members have a diverse variety of views on this subject.)

In England, the Vegan Society was founded in 1944. In an article by Dr. T.A.B. Sanders B.Sc. (Nutrition Ph.D.) and Dr. F.R. Ellis, M.D. F.R.C. Path. (President of The Vegan Society) on Vitamin B12 appearing in The Vegan (Spring 1977 edition) the doctors state: "We advise lacto-vegetarians, who only take small amounts of milk products in their diets, and vegans, to supplement their diets with vitamin B12 tablets, or to use vegetable foods fortified with the vitamin. Vitamin B12 deficiency has been known to result in infants breast-fed by vegan mothers. The only way of ensuring that a breast-fed infant has an adequate intake of Vitamin B12 is for the mother to take Vitamin B12 supplements. Meat-eaters who become vegan are unlikely to develop vitamin B12 deficiency symptoms until they have been on a vegan diet (without Vitamin B12 supplements) for 3 to 4 years, as meat-eaters generally have enough Vitamin B12 stored in their livers to keep them going for this time."

In America, VEGETARIAN WORLD Magazine has run articles taking a different point of view giving alledged sources for Vitamin B12 in non-animal foods. It is this writer's viewpoint that it is better to be safe than sorry, however for a different point of view write to Vegetarian World for back issues of their publications which contain these other viewpoints. Similarly, the American Vegan Society has also run articles from time to time in it's publication AHIMSA, which take the viewpoint that B12 supplementation might not be necessary if one uses abundant amounts of some of the non-animal foods which contain miniscule levels of vitamin B12. While this might be true, it's difficult to conceive of eating pounds and pounds of these few foods each day to obtain the miniscule levels of Vitamin B12 they might or might not contain when one needs only to take a Vitamin B complex tablet containing a reasonable amount of Vitamin B12 to accomplish the same thing and more.

PREVENTION Magazine recommends strongly, to the point of not selling ads for one B Vitamin alone without the rest of the B complex, that its readers take the full B complex as a supplement since some B Vitamins can, if taken alone, have negative effects, such as masking a

B12 deficiency. Nature gives us virtually all of the B complex together in things like wheat germ and synthetic non-animal B complex preparations with B12 included seem to go nature one better.

Does this mean that veganism is not natural? Not in this writer's point of view. I happen to have been a vegan for eight years. I use B complex supplements, a vitamin C supplement and a multi-vitamin and mineral supplement. Many other vegetarians do the same, while still others seem to get by without taking many or any supplements. I live fifteen miles west of Manhattan, New York, a place I visit on occasion. New Jersey is referred to as "cancer alley" in some corners because of high concentrations of polluting industries in the State. In my environment I don't think I'm getting enough Vitamin D, for example. Similarly, though my diet contains foods like fruits and many vegetables which contain Vitamin C, the extra rose hips vitamin C tablet I take each day gives me that something extra I need to help ward off some of the effects of the vehicular traffic in the greater New York air basin.

North Americans are, for the most part, settlers from other climes. Southern Europeans, latins, blacks, and Jews (I belong to the latter group) all have a relatively high level of melanin pigmentation in our skins to ward off the higher amounts of ultra-violet radiations in the sunlight in sunnier climes from which our ancestors originated. Living in North America, and in industrialized, over-clothed, under-sunshined, polluted North America at that, we'd all have rickets quite soon if we weren't using Vitamin D supplements. Similarly most Americans are on a basic meat-centred junk food diet, low in Vitamin C. Like many of their forebears who happened to be English and happened to have sailed about the world quite a bit in bygone days, they've learned to supplement their diets with Vitamin C or Vitamin C containing foods, like a morning glass of orange juice.

The reason we'd get into trouble without Vitamin C supplements or Vitamin C rich foods is that our primate ancestors, like today's and yesterday's monkeys, lost the

ability to synthesize Vitamin C some eons ago. We're an evolving species which has gone through many different changes in body chemistry, some brought on by ice ages, some by dietary patterns and shifts in those patterns, others by other as yet unexplained factors.

Since I don't trust even my natural, healthy vegan diet to ward off the total input of 20th century society, I use a bit of 20th century society to ward off the totality of its polluting attack on my system. For instance, I use ergosterol (irradiated vegetable oil) also known as viosterol, in the vitamin/mineral supplement of vegan origin that I take. This substance is the vitamin D2 added to the milk of lactovegetarians and carnivores, not to be confused with the vitamin D3 fish oils added to those same milks at the convenience of the dairy.

Did people once exist as vegans without taking supplements? Perhaps they did in times when the various micro-organisms containing B12 might have flourished more easily on foods that were then not refrigerated or dried (because drying and refrigeration did not then exist). Perhaps also some soils were more cobalt-rich than they are today, thus yielding more reasonable amounts of B12 in non-animal foods than exists in most of them today. Finally, perhaps humanity has changed over eons of being primarily on an animal-based diet and has developed a dependency on dietary sources of B12, thus losing the ability to absorb the B12 the body itself synthesizes. We know for example that in lactose intolerant cultures, where milk is not used past infancy, the milk sugar, lactose, cannot be digested because the enzyme lactase is not present past the weaning point in childhood. Adults who try to get milk into their systems in such cultures (most blacks, Jews and latins and many orientals are lactose intolerant) get sick. In Latin America, for example, milk powder sent as food aid some years ago ended up being used as whitewash for houses as the culture was a lactose intolerant one.

However, in milk-drinking cultures, in parts of Africa and Europe for example, where milk has been used for thousands of years, humans have developed the inheritable ability to generate the lactose digesting enzyme, lactase, past infancy. What all this means is that humanity is a changeable organism. Not all the changes may be good or bad, but simply changes which humanity, as a species, is flexible enough to make in certain circumstances. Veganism, then, in earlier eras, may have been possible for people without supplementation, while today it is advisable that supplements be used by vegans to stay on the safe side of scientific theory until (if ever) all the facts are in.

-NL-

These articles aren't the bottom line of the B12 question—as a matter of fact, if they tell us anything, it's that there IS no bottom line! Some of Sam's questions have been dealt with, but there has been much left unsaid. We welcome further comments and contributions to the vitamin B12 dialogue.

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ACCESS

Vegetarian Assoc. of America
Box 2068, Central Station
East Orange, N.J., 07018, USA

The Vegan Society
c/o Mrs. K. Jannaway
47 Highlands Rd.
Leatherhead, Surrey, Eng.

Vegetarian World Magazine
no. 216, 8235 Santa Monica B.
Los Angeles, Calif., 90046, USA

American Vegan Society
Box H
Malaga, N.J., 08328, USA

Vegetarian Times Magazine
101 Park Ave., no. 1838
New York, N.Y., 10017, USA

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COPING WITH ILLNESS

THE NATURAL

by Joan O'Reilly
Ottawa, Ontario

WAY

AILMENT — Jangled nerves — toss-and turn-type sleepless nights

MODERN CURE — various tranquilizers and sleeping pills

NATURAL CURE — herbal teas of all descriptions, some so mild you will hardly notice; others guaranteed to ease you into dreamland. Gather on a clear day. Use fresh or dry in a warm room away from direct heat. Store in air tight containers. For general pleasure and relaxation try tea made from red clover blossoms, raspberry leaves or leaves from any type of mint. A cup of catnip tea at bed time may be just the thing to ready you for sleep. Other insomnia cures include vervain, dill seed, celery, dandelion and cannabis. Most teas require more or less two teaspoons of leaves varied according to taste, sweeten with a little honey if you like. Some need to steep as long as fifteen minutes to develop full flavour.

AILMENT — Warts and corns

MODERN CURE — various compounds and acids

NATURAL CURE — simple method which works best with children is *Abra-Ca-Dabra*: Invent any simple or elaborate charm. Many physical ills are cured by the mind and warts are one of them.

The juice from many plants has been known to cause warts and corns to dry up and fall off. Some of the plants most commonly used for this purpose are: Milkweed; house leek; solomon's seal; mullein; dandelion and onion juice. A drop or two of juice on wart or corn three or four times daily for a few weeks should do the trick; if not, or warts are spreading see a Doctor.

AILMENT — the common cold

MODERN CURE — none — numerous drugstore items to relieve symptoms

NATURAL CURE — numerous plants that will do just as good a job of relieving your miseries. Herbal teas made from mullein, dittany, golden rod, boneset, and mint. Take hot with lemon and honey and go to bed. Nasturtium tea breaks up the congestion in chest colds. Hollyhock or other mallow blossom tea is emollient, sip to ease sore throat. Ground ivy tea will ease inflammation of mucous membranes, sore throat and bronchitis.

Mullein leaves may be smoked and are said to be a remedy for coughs and lung troubles. For nasal congestion sprinkle a handful of crushed flowers into a bowl of boiling water and inhale vapours. Ginger root may be chewed for sore throat, or tea can be made for a half teaspoon of powdered root and sipped to ease soreness. Onion juice mixed with honey is good for coughs and horseness. Onion poultice may be applied to chest to ease congestion and for pleurisy.

An other famous poultice is made from mustard seed powder. (Caution: Mustard will burn bare skin so watch carefully). Mix powder with equal parts white flour or corn starch. Add enough cold water to make a paste. Spread on clean cloth, large enough to fold over and enclose paste. Place on chest or back, check for redness every fifteen minutes. Remove when redness occurs. Some skins are more sensitive than others. More or less flour may be used so that heat is felt but burning does not occur.

One cannot consider leading a completely natural life without wondering what happens when illness strikes. We have been so conditioned to run to a medical specialist and on to a pharmacy, that most of us have forgotten or never bothered to learn the remarkable healing properties of plants and the folk remedies so relied on by our ancestors who settled this vast country. There are many excellent books on the subject, which, accompanied by a good illustrated plant field guide, could prove invaluable, especially if you are planning to live in an isolated area. As in all things, common sense must prevail. Serious illness or injury may require the care and treatment of a qualified physician. Never jeopardize your own or anyone else's health by self treatment when you feel expertise is required.



REMEDIES

COUGH SYRUP 1

1 cup flax seed (linseed)
juice of two lemons
1 cup water

Boil to a mush and strain. Add about three table-
spoons of honey, mix well, store in bottle. Take as needed
for sore throat, cough.

COUGH SYRUP 2

1 cup marsh marigold leaves
1 cup stinging nettle leaves
1 cup red clover blossoms OR 1 cup mint leaves OR 1 cup
raspberry leaves OR 1 tbsp Queen Anne's Lace (wild
carrot) seeds and 1 tbsp anise seeds, to give your syrup
the flavour you like
3 cups water

Boil 15 minutes, mash down and strain, squeezing out
all juices. Add 1 cup (more or less according to taste)
honey. Return to boil and mix well. Store in bottles in
cool place. Take one spoon at a time as needed

COUGH DROPS

1 cup colts foot leaves
2 cups water

Boil down to one cup, strain. Add 2 cups honey.
Boil until a drop forms a hard ball in cold water. Pour
onto greased pan, score into small squares before complet-
ely set. Break apart, wrap separately or roll in sugar or
powdered slippery elm.

HEMORRHOID SALVE

1 cup pure unsalted lard OR lanolin OR petroleum jelly.
Bring to boil. Add as many leaves as liquid will take
and still boil. Squeeze and mash leaves while boiling to
extract juices, about 10 minutes. Strain into jar, store in
cool place. Use as needed.

Fresh leaves are best. Any one of the following may
be used as well as any combination: fresh jewel weed,
witch hazel, nettle (sting is destroyed by cooking), mil-
foil (yarrow), shepherds purse, amaranth, house leek. This
salve may be used on the skin for other problems such as
itching or dryness.

CANADIAN NATURAL HYGIENE SOCIETY

Natural hygiene includes the principles of vegetarianism,
a largely uncooked diet, avoidance of additives and too much
protein, fasting, and other similar beliefs. This group has local
chapters throughout Canada, the U.S., England and Australia.
They publish books which sell at meetings and health food stores,
and host lectures by knowledgeable people in various aspects of
natural hygiene.

For membership and local chapter information, send a
stamped, self-addressed envelope with your request.

CONTACT

Can. Natural Hygiene Society
Box 425
Willowdale, Ont., M2N 5T1

ONTARIO ASSOCIATION OF HEALERS

This is a new organization formed to help people help them-
selves. It will be arranging monthly workshops aided by qualified
instructors as introductions to many of the healing arts.

Membership is \$8. single, \$12 double, and includes a monthly
newsletter.

CONTACT

Ont. Association of Healers
Box 624, RR 2
Orleans, Ottawa, Ont., K1C 1T1

ACCESS

TO NATURAL HEALERS

Dr. Greg Hershoff
551 Broadview Ave.
Toronto, Ontario
—naturopath, homeopath

Stephen/Judith Merrill
R.R. 2 (Gaspereaux)
Montague, P.E.I.
—spiritual healing, astrological
counselling, relaxation therapy,
natural diet

C.B. Colquhoun
90 Charles St. W.
Ingersoll, Ont.
—chiropractor, nutritional
healing

Wilson Chiropractic Clinic
1363 Wilson Ave.
Downsview, Ontario M3M 1H7
—chiropractor

*At present this is not a representative listing. We have over 70 natural heal-
ers on our mailing list, but we feel we can't list them here without their
permission and knowing a little more about them besides their name! If
you are such a person or know of one of good reputation, please contact
us. Let's really make this listing usable to all our readers.*

Ted Meseyton
54 - 14th St. N.W.
Portage La Prairie, Manitoba
R1N 2V3
—reflexology, acupressure, Shiatsu,
herbal and homeopathic remedies

Wm. J. Hogg
412 Obed Ave.
Victoria, B.C. V9A 1K5
—massage, hydrotherapy, naproathy,
reflexology, pressure point acupunc-
ture, herbal remedies

Wm. W. Morris
187 Steeles Ave. E.
Willowdale, Ontario M2M 3Y6
—chiropractor, naturopath

W.G. Dexter
208 Barton Ave.
Toronto, Ontario
—spiritual healing, electrical and
magnetic, universal energies—
light, colour and music

Fenelon Chiropractic Office
81 Colborne St.
Fenelon Falls, Ontario L0M 1N0
—chiropractor

Dr. A.R. Koegler
Box 94
Waterloo, Ontario N2J 3Z6
office—22 McDougall Ave.
—iridology, herbal medicine

Ontario Naturopathic Association
551 Broadview Ave.
Toronto, Ontario

Paul's Healing Sanctuary
693 Hutton Rd.
London, Ontario N6H 4L1
—spiritualist

David Rowland
Box 579
Thornhill, Ontario L3T 4A2
—herbal remedies, nutrition, diet
therapy

H.G. Lussow
Thornclyffe Market Place, B25
Toronto, Ontario M4H 1J6
—chartered herbalist, nutritionist
exercise testing

*This listing is provided as an information service to readers without endorsement of any particular healer or
healing method. We believe that people should have the personal choice and responsibility to choose which healing
method to use. If a surgeon's services are deemed necessary, a surgeon should be consulted. By the same token, if
herbs seem to be the best method for promoting healing in another situation, then herbs should be used.*

THE ECOLOGICAL EGGPLANT AND FRIEND

by Frances Sheridan Goulart
Weston, Connecticut

What's green and black and bred all over? You guessed it. And what do eggplants and green peppers have in common? Little, perhaps, except their tendency to proliferate in the summer vegetable garden. Even if you don't have a summer garden, you are faced with the same prodigious plentitude of these two vegetables from other peoples' gardens in bushel baskets at every roadside stand, in the produce bins of every urban or suburban supermarket.

What then can you do with a super-supply of eggplants and green peppers when you've made your last moussaka and pickled your last pickle? Lots. Fortunately, both vegetables share a number of appealing characteristics besides their low cost. Capsicums and aubergines are both low in calories, carbohydrates and both are among the most versatile of all the food plants cultivated for the home garden. They are low in fats and high in nutrients. And both occupy prominent places in the plain and fancy cooking of virtually every country.

Before you commit either pepper or eggplant to pot or processor, here's what's so rich after all about those jolly green and black giants who yearly embarrass us with their riches—and finally some tasty solutions...

ALL ABOUT EGGPLANTS

Eggplants (or aubergines) are plants, obviously, not eggs. What is not apparent is that they are members in good standing of the potato family. (They both belong to the solanum genus. The eggplant can be curried, stir-fried, rolled, steamed and more. Although the eggplant is an Eastern vegetable, associated today with the olive oil-producing countries like Greece and Turkey, the eggplant was first domesticated in Japan and India. This pretty purple vegetable shines both as a meat accompaniment or as a meat substitute. It is usually found as a plum-coloured egg- or football-shaped vegetable. The eggplant is one of the few vegetables grown in this country that thrives in the tropics as well.

The eggplant is a good potassium food and a good source of valuable fiber. It is low in calories and carbohydrate and fairly high in B1, the energy vitamin. In addition, eggplant is said to have the ability to bind up cholesterol and carry it out of the system.

Some of the smaller "midget" eggplants are grown as ornamentals and all types of eggplants can be used for vegetable dyes. When buying, look for bright firm eggplants that are light in weight for their size. Store in a refrigerator or dry cool place, 50 to 60 degrees F, well wrapped in wax paper. Do not peel until ready to prepare. One pound yields three cups diced.

Note: When cooking eggplant, switch from browning the eggplant in the skillet, where it soaks up oil like a sponge, and try the broiler. Just brush the slices with oil and broil until brown, turning once. Saves oil and calories.

ALL ABOUT GREEN PEPPERS

Having too many peppers is nothing to be in a pickle about. If you are several pecks of pickled peppers to the good even after pickling, hang in there. The uses for sweet green or red bell peppers never seem to peter out.

Peppers can be pickled, powdered, preserved, spiced, sauced, scoured, braised, stewed, ragouted, slivered, frittered, fried, pureed, dried, frozen, and further processed into a seemingly endless procession of main dishes, side dishes, brunch entrees, even pasta and breads.

Capsicum peppers are among the most commonly grown of all the garden vegetables. The most readily-found variety (out of the hundreds of types and varieties that are grown or can be raised) is the California Wonder.

Peppers are at their peak (as every home gardener knows) in August and September, but they are available commercially all year long. Most storebought peppers come from Texas, California, Florida or Louisiana.

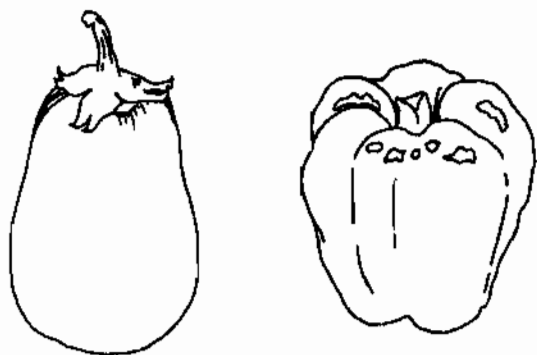
Besides being extremely low in calories, peppers pack a real nutritional wallop. They contribute calcium to the diet plus vitamin C. Green pepper juice has an abundance of silicon—a trace mineral that greatly benefits the nails and hair. Herbalists often recommend the juice of half a green pepper coupled with carrot juice as an aid to clearing up skin eruptions. Half a raw pepper provides a full day's quota of vitamin C and a Red Bell supplies even more C plus additional amounts of vitamin A. Peppers are low in carbohydrates, rich in a lot of essential vitamins and minerals including phosphorus, iron, sodium, and magnesium.

EGGPLANT PASTA SAUCE

- ½ cup olive oil
- 2 to 3 garlic cloves
- 1 medium eggplant (about 1 lb.)
- 2 green bell peppers
- 3 cups peeled and chopped tomatoes
- ½ to ¾ cup sliced black olives
- 3 to 4 tbsp. capers
- 1 tsp. crushed oregano
- ½ tsp. crushed basil
- salt to taste
- lots of fresh-ground black pepper
- 12 oz. tomato paste
- 2 cups dry white wine (more if needed)

1. Heat the olive oil in a large skillet.
2. Mince the garlic or put it through a press, and add it to the olive oil.
3. Let it heat gently while you prepare the eggplant.
4. Wash the eggplant first, then chop it very thoroughly, without peeling. Seed and dice the green peppers.
5. Add the peppers, eggplant, tomatoes, olives, and capers to the oil. Stir well until the oil is evenly coating all the vegetables.
6. Now add the remaining ingredients, stir again, and cover the skillet. Lower the heat to a very small flame and allow the sauce to simmer gently for about 1 hour.
7. Stir occasionally to keep any of it from scorching, and add more wine or some water if it gets too thick.

Makes about 2 quarts of sauce



GREEN PAPRIKA

You've heard about minding your P's and Q's? Well here's a recipe that utilizes the vitamin P-rich parts of the pepper that are usually thrown away. They are also the parts richest in ascorbic acid.

1. Remove only the stem from two or three big, unblemished, unwaxed, ripe bell peppers.
2. Slice thin, and dry in an oven (well-ventilated) at lowest setting or use your food dryer following manufacturer's instructions. Or dry on racks in a well-ventilated attic.
3. Toss dried pieces into blender and process to a paprika-powder by turning off and on.
4. Pour through a strainer and bottle. (Save what the strainer catches for seasoning stews, ragouts, sauces, etc.)

VITA-PEP

- 3 cups baked or broiled eggplant pulp
- 2 tomatoes, chopped
- 1 slice green pepper, chopped
- ¼ cucumber, chopped
- 1 stalk celery, chopped
- 1 green onion, chopped
- 1 cup sprouted green pepper seeds (optional)

Liquify all ingredients in a blender. Makes 5 cups. Serve as a beverage or a soup.

Both of these blender drinks are rich in iron, calcium, sodium, magnesium, several vitamins, and especially the food enzymes found only in raw, live food.

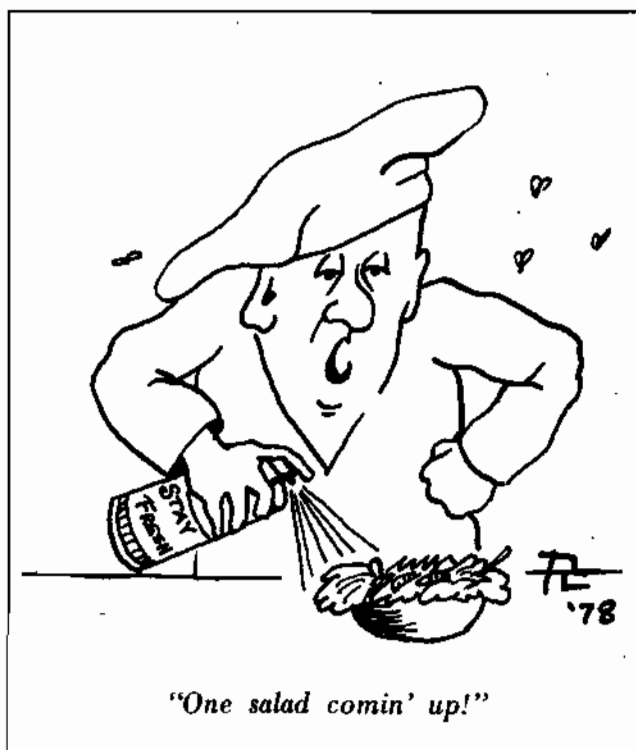
GREEN PEPPER PASTA

- 3 eggs
- ½ lb. green peppers
- ½ tsp. sea salt
- 1 tsp. granulated kelp
- 1 cup soy flour
- ½ cup raw wheat germ
- 1 ¾ cups unbleached white flour (plus a little for flouring the board)

Break the eggs into the blender container. Wash the peppers well and cut into ½ inch pieces. Drop the pieces through the hole in the blender cover, with the motor going at high speed, until well blended. Add the salt and kelp and blend in briefly. Scrape into a bowl.

Mix in the soy flour, and then the wheat germ. Stir in the white flour half at a time. Work in only enough flour to stop the dough from sticking and permit rolling. When you have enough flour, work by hand until you have a cohesive ball. Roll out, cut, and dry.

- NL -



for your recipe file by Judith Shrubsole
Paris, Ontario

TOMATOES

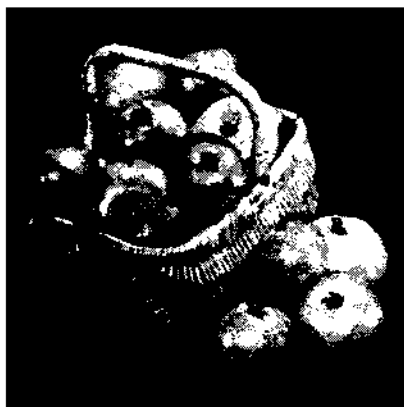
VEGETABLE JUICE

- 16 qts. ripe tomatoes
- 4 green peppers
- 4 onions
- 4 stalks celery
- 2 carrots
- 1 bunch parsley
- 2 tbsp. pickling salt.

Wash and chop vegetables. Put into a large enamel kettle and add a small amount of water. Cook over low heat till soft. Put through an extractor or a food mill. Put this juice back into the kettle, add salt and bring to boil, stirring frequently as tomato burns readily. Pour into previously sterilized jars and seal. Process in a boiling water bath for 10 minutes.

STEWED TOMATOES

Take as many tomatoes as you have and dip them in boiling water to remove the skins. Put fruit into a large preserving kettle and simmer for about half hour. Stir frequently as tomatoes tend to burn easily. Pour into sterilized jars. Add 1 tsp. salt to each quart and seal. Process in a boiling water bath for 35 minutes if using pints and for 45 minutes if using quarts. We use these stewed tomatoes all winter as a vegetable, simply heated up or add them to soups, stews, spaghetti sauce etc.



CREAM OF TOMATO SOUP FOR CANNING

- 4 gallons chopped tomatoes
- 6 green peppers, chopped and seeded
- 10 onions, chopped
- 1 bunch celery
- 1 bunch parsley
- 10 bay leaves
- 1-3/4 cups flour
- 1/4 cup sugar
- 4 tbsp. salt
- 1 tsp. pepper
- 1/2 cup butter

Cook vegetables together in a large enamel kettle till soft. Put through food mill. Put juice back in kettle and blend in the dry ingredients which have been mixed with some of the juice to form a paste. Bring to a boil and add butter. Pour into sterilized jars and seal. Process in a boiling water bath for 10 minutes. A tasty, much more satisfying variety than store-bought.

VEGETABLE SOUP

- 20 cups water
- 10 qts. tomatoes
- 10 onions, chopped
- 24 ears of corn with corn removed from cobs
- 2 bunches celery, chopped
- 2 cups carrots, diced
- 2 red peppers, diced
- 2 green peppers, diced
- 1 bunch parsley
- 3/4 cup salt

Chop tomatoes and cook with parsley till soft. Put through a food mill and put juice back into the preserving kettle. Add the other vegetables and water and cook till vegetables are tender. Pour into sterilized jars and seal. Process in a boiling water bath for 10 minutes.



GREEN TOMATO MINCEMEAT

- 1 peck green tomatoes
- 1 peck apples (I use spies)
- 6 cups brown sugar
- 2 lb. currants
- 2 lb. raisins
- 2 tsp. cinnamon
- 2 tsp. cloves
- 2 tsp. allspice
- mixed peel
- nuts

Wash and slice tomatoes. Pare, core and chop apples. Mix and add other ingredients. Cook about 3 hours until thickened. Pour into sterilized jars and seal while hot. Process in a pressure canner at 10 lbs. pressure for 10 minutes or in a boiling water bath for 25 minutes.

I recommend highly that if you have access to a pressure canner you use it because now many varieties of tomatoes are low acid. This means that they will spoil much more readily than the old types.

for your recipe file by Helen Brink
Greenville, Ontario

MAYONNAISE

There are three things that are made with great regularity in our kitchen - bread, yogurt and mayonnaise. Bread and yogurt are fairly obvious staples, but why mayonnaise?

Not only is a well seasoned mayonnaise a good dressing for salads, it can also serve as a quick and delicious sauce for fish or cooked vegetables, such as zucchini or cauliflower. An even more important use is as a moist and tangy substitute for butter. My husband and teenage children never seem to tire of their brown bag lunches made with whole grain bread spread with homemade mayonnaise, slices of an undyed cheese such as 'brick' and topped with alfalfa sprouts. Alternatively, you can make up very fine sandwich spreads with mayonnaise and a tin of tuna or sardines. Add a carrot or a cabbage wedge and an apple and you have a super lunch, nutritionally and gastronomically.

The substitution of homemade mayonnaise for butter or margarine has several advantages, if you are careful in the selection and storage of the oil which is its main ingredient. The use of cold pressed oils, rather than those extracted by means of solvents or under high pressure and temperature, is important but too complex to go into here. Read *FOOD FOR NOUGHT* by Ross Hume Hall, professor of biochemistry at McMaster University, who also explains why it's not a good idea to eat margarine, in spite of what the manufacturers and the medical profession say. Because no preservatives are added to cold pressed oils, they must be kept cold. In winter my bulk supply is stored in a dark corner of the woodshed and in summer it goes in the freezer.

If bought in fairly large quantities, good oils need not be expensive. The soy and sunflower oils, which I mix half and half, are about seven and eight dollars respectively per imperial gallon, but that is at a distributing warehouse where I also get bulk grains and flours. The price advantage is that mayonnaise costs approximately eight cents a pound for me to make. That's a lot less than butter, which contains more cholesterol and has colour added, and it's even less expensive than the "better" margarines.

The making of mayonnaise is easy with an electric beater, but with a blender it's a snap. The basic recipe calls for an egg, 2 tablespoons of cider vinegar, ½ teaspoon of salt, ½ teaspoon of dry mustard and a cup of mixed oils. The object is to make an emulsion which occurs without fail if the ingredients are chilled. Put everything in the blender except the oil. Turn the motor to low speed and add the oil in a very thin stream. If it thickens so much that the oil is not pulled down to the blades, stop the motor and stir it down with a spatula.

In actual fact, I never make the basic recipe. For one thing, it's more practical and there is less waste if the recipe is doubled. Additions of various sorts give enormous scope but, except for spices, these should be added after the thickening process is well advanced. A little cayenne, celery seed, tarragon etc. may be put in at the beginning. Things like onion, garlic, celery, chili sauce, pickle etc. will give real character, and a too thick mayonnaise can be thinned as well as made more flavourful by adding a little pickle juice.



One more thing - but don't tell this one to your 'straight' neighbours or they'll *really* think you're daft. You can whip up an excellent face and hand cream for next to nothing using the same basis as for mayonnaise. Like many an invention, mine was discovered by accident the day I stuck the spatula into the blender before the blades had stopped turning. Mayonnaise doesn't do much for the ceiling, but I decided that what had landed on my face was, apart from the salt and spices, not a bad idea. Vegetable oil, egg and cider vinegar are all good for your skin. If you add the contents of a capsule of Vitamin E, the gel from a leaf of aloe vera and a little pure lanolin, you have a cream of the highest quality. So as not to smell too much like a salad, you can add a drop of balsam of Peru or some other aromatic herb. Do keep your concoction in the refrigerator, though, or the oils will eventually go rancid. I am a potter, and this is the only stuff that prevents my hands from nearly falling off!

The virtues of homemade mayonnaise are legion. I hope you find it as useful an item in your housekeeping as I do in mine.



TOWARD A BETTER TOMORROW

by Kathleen Kenna

Supermarket managers have recently encountered a new phenomenon not covered in their training manuals. Shoppers are marching into stores with their own shopping bags, making their purchases and dumping unnecessary packaging at the check-out counters.

It's certainly getting the point across, but in my opinion, the effectiveness is questionable and certainly only short-term.

The truly conservation-conscious shopper should avoid supermarkets. Most products on the shelves are grossly over-packaged in materials that often cannot be recycled. Grocery items that were once displayed without packaging are now robed in plastics. Poultry pieces sit on an absorbent pad in a styrofoam tray covered with plastic, and vegetables are often pre-packaged and priced in plastic or paper bags. Convenient for the supermarket staff, but a costly waste for the consumer—grocery prices reflect both the price of the packaging and the extra display space it covers.

The consumer who doesn't have access to his own produce will profit most by shopping through local markets or co-ops. Although the rural shopper usually has better access to good markets, most Canadian cities offer inner-city markets where produce can be purchased without packaging.

Before setting out for the market, it's preferable to have a good conception of the amount of groceries that will have to be carried home. For a short trip, a string or expandable type of shopping bag will serve well; for hefty groceries, re-used bags, boxes, baskets or a well-lined shopping cart should serve the purpose.

For items that require individual wrapping, be sure to include mater-

ials such as re-used bags, cheesecloth or even old pillowcases.

If you seem to collect a lot of unnecessary bags and wrappings, why not offer them to market or co-op managers? Our local co-op depends on recycled packaging and shoppers bringing their own bags.

WASTED NUTRIENTS

Now, the groceries.

Statistics show that the nutrients discarded in annual potato peelings by the average family are equivalent to the protein in sixty steaks, the iron in five hundred eggs and the vitamin C in ninety-five glasses of orange juice. (Energy, Mines & Resources Canada Statistics).

By preparing vegetables in their natural state, the cook not only saves nutrients but time. Canadian recipes often overlook the taste and nutritional value of "unconventional" foods

such as beet, turnip and carrot greens. Ethnic recipes can often help fill the gaps—Mexican tamales, for example, make good use of otherwise discarded corn husks.

As with any other facet of conservation, the consumer should be innovative, always looking for ways to improve consumption habits.

The imaginative cook can prepare a nutritious and unique meal without discarding so much as a vegetable root or leaf. All unavoidable food wastes, such as egg shells, cores and turnip peelings, should be added to the compost pile.

NEXT ISSUE: Recycling unavoidable packaging.

Comments? Questions? Suggestions? Mail letters to: 4020 Boul. St. Jean, Apt. 816, Dollard des Ormeaux, Quebec, H9G 2L6

CONTACT

ACCESS

CATHARINE TRAIL NATURALISTS' CLUB

The Catharine Trail Naturalists' Club was formed in 1973 and was named after the noted pioneer/naturalist/author who came to Canada in 1832 and settled in the Peterborough district of Ontario.

The purpose of the club that bears her name is "to foster greater understanding and appreciation of our own environment and to serve, wherever possible, as a concerned voice in the conservation of our natural heritage."

Family membership costs \$6.00, student \$1.00, single adult \$4.00.

CONTACT

Membership Chairman
68 Lakeview Blvd.
Beaurepaire, Quebec H9W 4R4.

BACK TO THE FARM RESEARCH FOUNDATION

Here's a group in Saskatchewan that has been very active in the last few years. They have made many submissions to government environmental studies in the areas of land use, water quality, drainage and flood control to name a few.

This group has also been sponsoring a grasshopper harvester competition — they want someone to design a mechanical harvester as an alternative to chemical pesticides. Prizes are offered.

Back to the Farm
Research Foundation
Box 69
Davidson, Sask., SOG IAO

ECOLOGY ACTION CENTRE

The EAC is Nova Scotia's big environment group (five hundred + members). They are doing some very interesting things in the energy field (anti-nuclear power, conservation, public transit, solar); urban conservation issues (electric rates, car pooling, paper recycling, refillable bottles).

Individual membership is \$5.00.

CONTACT

Ecology Action Centre
Forrest Building
Dalhousie University
Halifax, N.S., B3H 3J5

SEWAGE MANAGEMENT WINS AWARDS

Two British Columbians, who have made outstanding contributions in the field of sewage management have been presented with 1977 B.C. Environment Achievement Awards.

Mr. David S. MacKay of Vernon has been selected to receive the 1977 award for personal achievement in waste management in recognition of his personal contribution to the sewage spray irrigation scheme of the City of Vernon, which removed the city's sewage discharge from Okanagan Lake and applied it usefully on land.

A second award is being presented to Mr. Donald Brayford of Maple Ridge, who is the operator of the District of Maple Ridge sewage treatment plant. The award was for improving the efficiency of the plant.



written and illustrated by
Susan Hamilton
South Mountain, Ontario

During the first year with bees, it is tempting to go into the hive frequently, since there is much for the novice to experience and learn. It is most important to curb your peeking curiosity and disturb the bees as little as possible. Each time you manipulate a colony, the social organization and carefully controlled temperature are disrupted. This can put them back twenty-four to forty-eight hours. And a frame of brood can be fatally chilled in fifteen seconds.

Obviously, it is important to approach your apiary in an organized and well-equipped way. Remember to choose a warm, dry, sunny afternoon and be properly dressed. Often it is a good idea to pre-plan your movements. A hive tool, smoker and fuel, matches, beeveil, an extra hive cover and a bowl or pail for excess wax should always be standard equipment. A note pad is also helpful if you have many hives; in time, my gloved hand learned how to manipulate a honey-covered pencil to scrawl pertinent notes. In fact, keeping a diary is ideal, but it requires a great deal of discipline (something I don't have). Remember not to walk in front of the entrances of the hives. This upsets the bees in two ways—interferes with their flights in and out of the hive, and it makes them feel threatened.

Set yourself up behind your hives. (You may use the extra cover as a carry-all or a seat and save your back) Prepare the smoker. Once it's working nicely, shove a handful of loose grass in the opening so that the fuel doesn't burn up too rapidly and leave you smokeless half-way through your work.

On top of each hive we keep a large rock. These rocks keep the hive covers on during violent storms. We lay both the rock and the inner cover (inverted) carefully

on the ground next to the hive. Any frames that we remove from the hive are placed on this cover so that stray bees fall into it, instead of in the grass, and can be easily returned to the hive.

To inspect a colony, gently pry the inner cover loose from the top super. (I have read that if the weather is cold, the sound of propolis breaking will upset the bees.) Raise the inner cover enough to allow two or three puffs of smoke to enter the super. Close the cover, and puff some smoke through the entrance reducer and wait for a few minutes for this to take effect. You may now move on to the next colonies and remove the rocks and hive covers while you are waiting.

Returning to the "smoker" colony, remove the inner cover and scrape the excess wax and burr comb from the cover and top of the frames into an appropriate container. Take the hive tool and gently separate the frames. Manipulation at this point must be slow and careful. Careless handling or "rolling" may kill the Queen and some worker bees.

We start by separating the frames at the far left or right of a super. These are usually the last to be drawn and filled with honey or brood, so they can be removed and examined with the greatest ease. Angle the frame towards the sunlight to get the best view of brood, eggs and possibly the Queen. Note the activity within the hive and observe the egg laying patterns. A good Queen lays eggs in large, compact areas, like a half moon in the center of a frame, surrounded by good supplies of honey and pollen. A poor Queen has a sporadic laying pattern, an egg here and there.

After examining all the frames in a super, you'll be able to judge what kind of queen you have. If you are unable to locate the Queen, capped brood, larva or eggs, you are queenless. Experienced beekeepers can tell by listening to the sounds a colony makes if it is queenless, even if the colony is about to swarm. It is often better to listen and watch a hive from the outside to determine what activity is going on within.

In some cases when a colony is queenless, a worker bee will take over the function of laying unfertilized eggs. Often she places two or three eggs in the same cell. Unfortunately, these eggs will only produce drones. The male drones in a colony of bees have only one recognized function, that of sexual reproduction. (Ormond and Harry Aebie, who are famous beekeepers, maintain that drones function as useful heat producers during brood rearing. This sounds to us like a reasonable hypothesis.) Queen problems can be tackled in a number of ways, which we'll describe later.

It's very important to keep your eyes open for disease when examining the combs. Samples of suspect combs should be sent to your provincial apiarist or dept. of agriculture. It's also a good idea to contact your local bee inspector so he can come over and examine them.

While we are on the subject of combs, old combs should be renewed on some regular basis. Over the years, they blacken and as each new bee develops in the comb cell, the cocoons of the larva are left inside, and the cells become smaller. This leads to smaller bees and possibly disease. (We know of one beekeeper who used the same combs for over thirty years and eventually encountered disease which he blamed on the use of old combs.) It's interesting to note also, that old combs are heavier in weight, and when judging the weight of the super for winter feed, they can cheat the bees of as much as ten pounds of honey per super. Brother Adam, an experienced beekeeper in England renews his combs every four years... this may be unrealistic for many North American beekeepers but it's something to keep in mind.

Back to the brood nest. If you find a few Queen cells in the center of a comb, it means the bees plan to supercede or replace their Queen, whereas, Queen cells located at the bottom of the frame indicate that the bees intend to swarm. Supercedure cells mean the Queen is old, not laying a sufficient number of eggs or in some other way no longer acceptable to the rest of the worker bees. Modern scientists talk in terms of "pheromones" or chemical substances that convey messages throughout the hive. When the Queen makes changes in (like stopping) excretion of these pheromones, the worker bees know it's time to replace her. So in order to produce a Queen, a fertilized egg is placed in the large Queen cell and fed on a glandular secretion from worker bees called "royal jelly". All larva are initially fed on this hormonal substance, but Queens are fed it for a longer period of time. As you become more experienced in beekeeping you can start "Queen rearing". This involves eggs ideally less than eleven hours old, (timing here can be tricky), small wax cups, royal jelly, and special brood nests... and a lot more information than this short article can provide.

Cutting off swarm cells does not eliminate the possibility that the colony will swarm. It is up to the beekeeper to determine why the bees wish to swarm. Perhaps the hive is congested, or poorly ventilated and overheated. A simple way to relieve congestion is to reverse supers, since the top super is usually the first one filled with brood and honey. The Queen will then have more space to lay eggs. It is also possible to add a third super. Frames of brood can be brought up from the two lower supers and exchanged for foundation or empty comb. This will relieve congestion but great care must be exercised so that the brood is not chilled, and the Queen is not brought up. The Queen is better kept in the brood nest or lower two supers, and anything above used for honey. Nurse bees will never leave brood so you can imagine what a disaster extraction would be with your honey supers filled with brood and nurse bees. To avoid this situation, we use a Queen excluder. This is a wire screen with just enough room for the workers to crawl through, but too small for the Queen. As soon as our third super is





QUEEN CELL
ON MAN MADE
WOODEN PEG

packed with honey and it's time to add a fourth, we remove the Queen excluder. This speeds up movement through the hive (important during nectar flows) and the Queen will not usually rise above the full honey super.

We use the stacking system for assuring honey is more than three quarters capped and ready for extraction. When super number four is full, super number five is placed between four and three and when it is also full, super number six is placed between super three and four. This way the frames are well filled with honey.

Also, when it's very hot outside, we stagger the honey supers about three quarters to one inch to allow for good ventilation. For instance, super number three would have a three quarter inch space at the front and super number four would have a three quarter to one inch space at the back. The rain may run down the insides of these supers but when it's very hot outside the bees don't seem to mind.

The question now arises: how do you know when it's time to add your first super. Ormond and Harry Aebie in their book *The Art and Adventure of Beekeeping* give some interesting, and we think, good advice. They say that they don't add a super to their brood nests until the incoming count of bees laden with pollen and nectar is one hundred and twenty per minute and the temperature outside is 70 degrees F. In cooler weather, one hundred and fifteen bees per minute is a good count. We have only used this method for one year but we think it's good. They also say it takes twenty days for an average hive to fill the first super with honey if they are given drawn comb, and twenty-four days if they are given foundation. Also, these men place the supers in the sun to warm them before giving them to a colony.

The Aebies were into very high yields so they wanted to disturb the bees as little as possible. They listened after sunset to the supers and were able to tell by the noises a colony made just what was happening. They describe a great "roaring" during nectar flow, and when this noise stopped it indicated to them the super was full of honey. They then would add another super. It might be wise for the novice to take a peek. If you give the bees too many

supers too quickly they won't fill all the combs. Also, the Aebies left all the supers on until it was time to extract.

Now a word about buying extractors. We had a small four frame reversible extractor which worked well but was time consuming and had no lid. We used to do our extracting in the kitchen, and the walls and all our friends would get covered in a thin film of honey. Finally we moved up to a thirty frame stainless steel extractor, and we have never looked back. It takes four to six hours to do what we used to do in a week, and more important, for the first time we can do it alone, without the help of friends (not that we didn't enjoy the helping hands of friends).

The next article in this series will deal with taking off supers and extraction.

-NL-

ACCESS

BEEKEEPING MAGAZINE

The beekeeping industry in Canada has a fine little monthly magazine called, predictably, *Canadian Beekeeping*. It contains a wide variety of articles of interest and use to both new and veteran beekeepers, ads, market news and so on. Subscription rate is \$7. per year.

CONTACT

Canadian Beekeeping
Orono, Ont., L0B 1M0

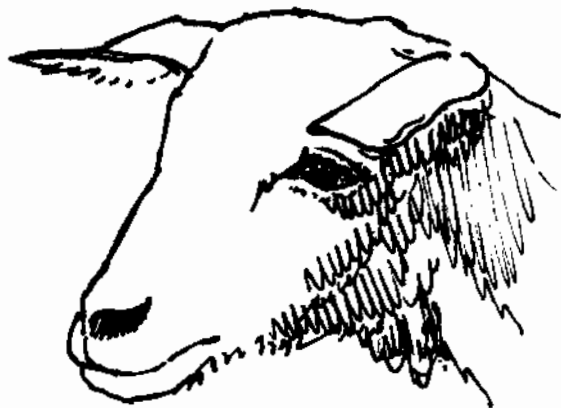
THE LAST AND THE GREATEST

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NEW SCHOOLS EXCHANGE
PETTIGREW, ARKANSAS 72752

So You've Decided



TO BUY A GOAT

by John Foster
Cayuga, Ontario

PART 4: KIDS AND KIDDING

T

o most people, the miracle of birth is no longer the mystery-shrouded business it used to be, and thanks be for that. Our modern doctors and scientists, thankfully, keep us informed of the progress or problems of the developing fetus, every step of the way during a human pregnancy. But with animals, the story is somewhat different.

As with most livestock, breeding can be, and is (in most cases) regulated by the owner of the animal to a certain degree. Cows can be bred throughout the year, whereas goats, being seasonal breeders, are unlikely to accept the buck other than between the months of October and January. These are only rough guidelines; the season could be before October and later than January. Experiments have been done with out-of-season breeding, with some success. But for this to be a real success, very careful management is required. Last season, we had twelve does freshen between August and October, with another four kidding by Christmas. Management is the essential ingredient to successful out-of-season breeding and I would strongly recommend Nature be allowed to take her course unless you produce milk for the commercial market. Nature intended the doe to carry the unborn young during the cold months of winter, when food is scarce, and produce the kid when the fresh flush of vegetation is available to her in the spring.

One of the first problems a novice goat keeper with a single doe will be faced with is recognizing the signs indicating that the doe needs the services of a buck. In this respect observation is of prime importance. There are a number of signs, any or all of which could indicate "the time is now". She will become restless and agitated, bleating far more than usual, and will wag her tail. Her vulva will often be red and slightly swollen, and may have a discharge. Usually, a doe will instantly drop her tail when it's touched at the root, but when in heat, will often wag it. Another sign is a noticeable reduction in her milk yield for a short period. An old trick is to keep a rag impregnated with "buck scent" in a screw top jar. Should you suspect she is in heat, give her a whiff of the rag and she will soon tell you, yes or no. If you haven't already made arrangements with someone who owns a buck, make them rapidly, or you may have to wait another three weeks to catch her again. The heat period could last as long as a half day, or could be up to thirty-six hours in duration. They arrive twenty-one days apart.

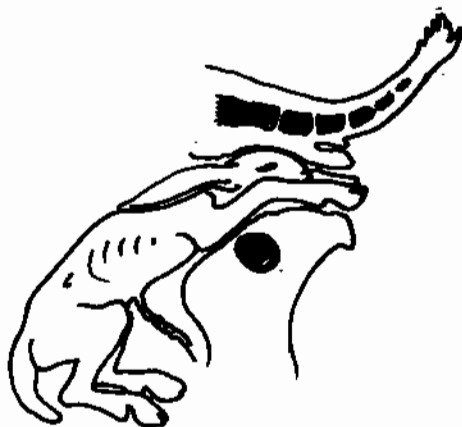
The treatment she is to receive over the next five months depends on how good a milker she is, or how dependent on her milk you are. I would very strongly advise that the doe be dry for ten weeks after service. During the first ten weeks of her pregnancy, a normal diet is quite adequate for her needs, as the embryo makes little or no demands on her. The growth rate is very slow during this time. After the half-way mark the growth rate accelerates, and then is the time to begin giving her a slightly better diet. The latter half of the pregnancy will determine how she will produce milk during the course of the next lactation. Save on your feed bills and rob yourself of milk. Besides feeding the rapidly growing young, your doe will be storing body fat, on which she will draw during the lactation. If she has no fat to use, how can she be expected to milk well? Concentrate should be given at about the half-way mark, starting with a handful, and the amount gradually increased up to the time of the expected birth. Work on the assumption that she will milk as well as during the previous lactation, and feed accordingly. If it's a doe you haven't milked before, assume she will give six to eight pounds of milk per day, a month after she has freshened, and feed three pounds of concentrate per day, divided into two or three feeds. Her body condition during the final four weeks of pregnancy will give a good indication as to what you can expect from her during the lactation. The ideal to aim for is an animal that is well fleshed, but not fat. A good milker is never fat—too much of herself goes into the milk pail for her to be fat!

The date of the service will have been noted, and you will know, to within a few hours, when the birth will be. Here again, observation is the keyword. Goats and sheep are amazing, in that they seem to have the ability to postpone the actual birthdate, to coincide with favourable weather conditions. They prefer a warm humid day to birth the young. This, of course, is the natural way with animals on free range. Housed goats are not affected to such a degree by the weather.

We will presume that as the great day draws near, the pen to be used for the birth has been prepared. It will have been thoroughly cleaned, and a thick bed of clean straw laid down in readiness. Don't get alarmed if she doesn't produce exactly to her time; they seldom do. Goatkeepers with years of experience get surprises. In most cases, your doe will need no assistance during the

actual birth, but it is as well to be on hand "just in case". A doe that has kidded previously will, in all probability, wait until your back is turned, and have the kids licked dry when you return. A first kidder may need a little assistance, but don't get alarmed. Only assist if it is obvious she is in difficulty.

Most does lay down for the delivery, but the odd one will stand. This is purely a matter of her own choice so don't interfere but leave it to her. The labour and delivery can be over in a few minutes, or can extend to a few hours in twin or multiple births. In twin births, (twin and single births are by far the most common), the kids arrive usually fifteen to twenty minutes apart. Many goatkeepers try to be present at the birth, but that isn't always possible, and in most cases, the doe is quite capable of birthing the kid or kids, without any assistance. In the odd case where there is a problem, your presence can save the doe a great deal of wasted effort, and possibly, exhaustion. Should there be any problem, such as a wrong presentation, you can see what is wrong, or what you suspect is wrong, and call for the assistance of an experienced goatkeeper or the local vet.



In a normal delivery, the forefeet and nose are the first parts of the kid to be seen. As she heaves, the head and forelegs are the first to be expelled. When the head is clear, the battle is virtually over; the body and hind legs follow quite easily. Remember, the kid's back, top of the forefeet, and the top of the head, should be at the top, nearest to the doe's tail. Should it be the underside of the feet towards the tail, this will be reverse presentation, the rear feet and legs leading the way. This is considered by many goatkeepers to be normal, and no cause for alarm. Just so long as the feet presented are a pair, that is, either fore or rear, and the nose is presented with the forefeet, there should be no problem. Any presentation other than the two described, is abnormal. One little trick to try, before you call, panic-stricken, for assistance, is to stand the doe with her rear end elevated. A bale of straw or hay under her hind feet will sometimes have the effect of drawing the kid back inside her, and when she begins to push out the kid, quite often it is in the correct position. It is well worth a try, and may save you the cost of the vet's visit.

Sometimes, in a twin birth, the doe will have both kids within minutes of each other, but at other times, she may stand to lick and attend to the first born. If the umbilical cord hasn't already broken, it will break when she stands. Should it not break, tie a string round it tightly, about three inches from the kid's belly, and another an inch away from the first, then cut the cord between the strings. Thoroughly douse the cord (still attached to the kid) in iodine (teat dip failing iodine). This is to prevent any infection being picked up through the cord, and also



helps it to dry quicker. Either liquid will deter the doe from licking the cord.

In most cases, the doe will lick the kids dry soon after the birth. Keep an eye on things. A doe may show a preference for one kid, and ignore the other. Should she show a marked preference for one, take it from her until she has licked and claimed the other. Depending on the weather, a bucket of slightly warm water will usually be appreciated, and a treat (I use bran mash) very acceptable. A careful watch should be kept for the passing of the afterbirth, **ONE FOR EACH KID**. Some does will eat this, others ignore it. I prefer removing it from the pen. No harm will come from it being eaten, but goats have been known to choke from gulping it down. A retained afterbirth is a job for a vet, or a very experienced stockman. Do not attempt to pull it yourself.

The decision as to how the kid is to be raised will already have been made: sucking the doe, or bottle or pan fed. Of the two, I prefer the pan method. With a little patience, a kid can be taught to drink from a pan, or some such shallow vessel, in little more than a day. Let the kid suck your finger, and persuade it to dip its nose and mouth into the milk, while still sucking the finger. They soon catch onto the idea. We find training them to a pan or shallow bucket to be the easiest, as water can be given without the fuss of any further training, and a pan is much easier to keep clean and sterilized than a bottle, a very important aspect of kid raising. (scour and bloat are two problems which can arise from using dirty utensils, and both are better prevented than cured.)



The colostrum, or first milk, is an absolute necessity to the well-being of the new arrival. The sooner the baby can be persuaded to swallow at least two ounces of the colostrum, the better it will be. It serves three important functions. Besides the food value, this first milk contains an agent to flush out the tiny stomach. The first bowel movement the kid will make after the colostrum has been taken is like a sticky, tarry substance. The first milk also contains bacterial antibodies which arm the kid to fight any bacterial infection it is likely to encounter. If you have decided to hand rear the kids, the colostrum is still vitally

necessary. A word of warning: colostrum burns very easily in a pan. It is better and safer to use a double boiling pan to warm it in. Milk should be heated to 100 degrees F. for kid feeding. At the first milking (for colostrum), do not milk the doe out clean, take about what you judge to be half, and leave it until the next milking, then milk her out clean. If for any reason, you fail to get the colostrum, a fairly reliable substitute can be made up, using three cups of goats milk, one well-beaten egg, and one tablespoonful of cod liver oil. Naturally, it isn't as good as the real thing, but in an emergency, it will serve.

We try to feed hand-reared kids at least four feeds per day, of four ounces per feed. If you have the time to spare, five or six feeds would be better than four. Divide the sixteen ounces into as many feeds as you are giving the kid. In a little over a week, your baby will be nibbling at any good quality, leafy hay given to it. By the end of two weeks, they could be trying the concentrate. Kids left on the mother are quicker at eating solid food than the hand-reared kids, but they learn quickly enough, especially if they are in a pen with older kids.

At about two weeks old (or slightly older if they have started eating solid food) they can gradually be changed over from the doe's milk to a substitute. The change-over must be done gradually, over at least a week. Don't be

tempted to make a rapid change from the mother's milk to the substitute. Begin by substituting about a fifth of the ration. Over the next six or seven days, gradually increase the substitute, decreasing the pure milk. The kid may show its objection to the change by not taking the first one or two feeds, but let her go hungry and she'll take it well enough afterwards. Should the kid begin to scour, (diarrhea) stop the milk feed for a twelve hour period and offer instead warm water. When you resume the feed, dilute the milk with warm water. (milk 75-80%, water 20%). Make sure the kid's pen is clean, warm and draught free, and keep it that way. In addition to the regular feed, offer warm water. You may be surprised by how much water they will drink. Take the time to ensure the kid's feeding utensils are scrupulously cleaned after each use. Like any other baby, a kid's stomach is very easily upset and an ounce of prevention is better than a ton of cure.

Give the kids the best start possible. Your baby "girls" are your future milk producers. Now is perhaps the best time to offer a word of warning! Please don't allow either yourselves or your children to become too attached to buck kids. We all know they are just as sweet as the baby does, but if they were all kept..... With good feeding, they will be ready for market in about three months. *Painful as it will be, be advised: Let them go.*

- NL -

The drawings accompanying this article were done by Sara Emond, RR 2, Thorsby, Alberta. For an excellent graphic explanation of the birthing of a kid, see Natural Life 14 where we featured two pages of Sara's drawings. Her artistic ability and knowledge of goats are an excellent aid to the understanding of the process of birth and any complications that might arise.



"I ONLY HOPE I CAN REINCARNATE INTO SOMETHING ON THE ENDANGERED SPECIES LIST . . ."



Port Dover was a stop along the way this summer for a group of bicyclists pedalling its way across the continent. Calling themselves the Solar Rollers, the group is warning listeners of the dangers of radioactive material from commercial nuclear reactors.

Their trip began in Seabrook, New Hampshire, controversial location site of a large twin nuclear reactor and target of recent huge peaceful demonstrations by a coalition of nuclear groups called the Clamshell Alliance (62 Congress St., Portsmouth, NH).

The Clamshell Alliance Bicyclists were distributing printed material to educate the people along the way to their "non-nuclear living" message. Lacking bumpers to proclaim their beliefs, knapsacks sported anti-nuclear, pro-sanity slogans.

ACCESS

DEVELOPMENT EDUCATION

Rafiki is the name of a magazine produced by the Miles for Millions organization. It is designed as an introductory magazine on development issues in the Third World and in Canada. It synthesizes and simplifies some of the already available material on the subject. ("Rafiki" means friend in Swahili.)

Its main audience is high school students and teachers in the Toronto area, but its format and information make it relevant and useful to anyone. There are articles on third world subjects, as well as educational how-to-do-it pages, cartoons, recipes, projects, puzzles and a resource page. It is a limited circulation magazine, but Editor Leslie Hardy tells us that interested readers of *Natural Life* will be gladly sent a copy if available.

CONTACT

Miles for Millions
Development Education Program
Box one million, Stn. A
Toronto, Ont., M5W 1A0

NONVIOLENCE AND CHILDREN

We've recently discovered a valuable personal growth tool in a book called *Manual on Non-violence and Children* which is published by the Friends Peace Committee—a group of Quakers concerned that children as well as their parents and teachers develop non-violent attitudes and skills.

The manual is very useful in helping children and adults establish an atmosphere in which they can resolve their problems and conflicts non-violently. Here, "non-violence" means ways to act on problems and challenges without emotionally or physically damaging anyone.

The process is based on five elements which contribute to an atmosphere in which people can nonviolently resolve conflict: affirmation (acknowledging good qualities); sharing feelings and experience; supportive community; problem-solving experience; enjoying life.

The manual describes a number of approaches in which adults can act as "facilitators" to help children learn to deal with conflict in particular situations. Most of the problem-solving techniques can also be useful for adults who weren't fortunate enough to learn as kids.

There's a great bibliography of kids' books which are useful for exploring these feelings and conflicts as well as destroying sex role stereotypes. Also included is a section of selected cooperative games for children and adults.

This excellent resource book costs \$5.00 (US).

CONTACT

Nonviolence and Children Program
Friends Peace Committee
1515 Cherry St.
Philadelphia, Pa., 19102, USA

CSPCC

This acronym stands for the Canadian Society for the Prevention of Cruelty to Children. E.T. Barker, MD, D. Psych., C.R.C.P., has produced a couple of issues of a journal of the same name which shows much promise.

It is dedicated to ending the abuse of children—both physical and psychological, and the general breakdown of family as perceived by the Society. Rights of children is an issue not much discussed—we're glad to see Dr. Barker taking up the cause.

Annual membership is \$10.00 which includes the quarterly journal.

CONTACT

CSPCC
Box 700
Midland, Ont., L4R 4P4

BOOKS BY KIDS

Here is a publishing venture created to provide a voice for young writers. These folks believe that "kids have important messages for one another, messages that adults may neither be able to produce nor share." So books are published containing poems and stories by kids and they are successful—kids want and need to be heard—to know that their perceptions and opinions are important to others.

To ensure that the books appeal to kids, all submissions are read and discussed in workshops (held in schools or libraries or sent to a review panel of kids. For the most part, material is published in its original form (with the exception of copy-editing of course). No condescensions here—just kids doing meaningful real life work.

Books by Kids is also concerned with showing the public the realities of products created by kids. So good quality publishing and stories written by kids made a dynamic combination. Many bookstores and libraries have the books "Making Waves," "Worsandwich" and "The Thing in Exile".

Publisher Rick Wilks tells us "We are always interested in contacting new authors or illustrators. We read and evaluate all submissions and will write back to the author."

CONTACT

Annick Press
23 Homewood Ave.
Willowdale, Ont., M2M 1K1

INTERNATIONAL YEAR OF THE CHILD

A year dedicated to children's welfare was first proposed in 1974 by a representative of non-governmental organizations at a UNICEF meeting. In December of 1976, the United Nations declared 1979 to be International Year of the Child. 1979 is the twentieth anniversary of the UN Declaration of the Rights of the Child, and is an opportunity for every country and local area to increase its efforts to guard and implement these rights.

In Canada, Health and Welfare Canada is the coordinating body for governmental I.Y.C. activities. We will be reporting on these activities in the next few issues. A number of non-governmental organizations have also set up a resource centre and coordinating body.

CONTACT

1979 IYC
323 Chapel St.
Ottawa, Ont., K1N 7Z2

IYC Report Newsletter
Secretariat of the IYC
866 UN Plaza
New York, N.Y. 10017, USA



TRY A COUNTRY

by Margaret Joy Borle
St., Albert, Alberta

illustrated by Susan Hamilton
South Mountain, Ontario

The tree house is finished! Now you will want to furnish it. You may be able to scrounge some furniture from your mother, but suppose you can't? My suggestion is that you try a farm auction.

Everybody loves a bargain, so perhaps your parents won't be too hard to convince; after all, you are luring them with the promise of bargains, a day in the country and some of the best tasting home-made pies at a price they haven't seen in years!

Once you have persuaded your parents to take you, you have to locate your auction. Your local paper, if you live near a farming community, will provide news of up-coming auctions, as will some radio stations (probably the ones that play country and western music), and the small town newspapers.

The papers will list the location of the auction, the name of the person who is selling the goods and the name of the auctioneer. Then they will list the items to be sold. Household and miscellaneous items will be at the bottom of the list in most farm auctions, but will be sold first. You might find the miscellaneous items of interest; small tools, nails, rope and even paint may come on the block for sale.

Try to arrive early to check the items you wish to buy. Decide ahead of time upon the price you want to pay, and stick to it. Remember that the auctioneer has the responsibility of getting as much money as possible for each item, so be prepared to withstand some wheedling.

If you have never been to an auction before, practice listening to the auctioneer. The adult you are with could bid for you, but it's more fun to do it yourself. When you are ready to bid on something, stand where you can be seen by the auctioneer or a helper. For you, this will probably

be near the front of the crowd. The auctioneer will hold up or state which item to be sold and then suggest a price for it. If no one takes the bid, the price will be lowered until the bidding starts, then with each bid the price will rise.

Once you have placed your bid, by calling out the price, or by catching the eye of the auctioneer and nodding your head, be careful that you don't bid again too soon, or you might find that you are bidding against yourself.

Don't expect to find all of your furnishings in one sale, and don't be too disappointed if you are outbid on something you wanted. If you want it badly enough, by all means go a little beyond what you had planned, but don't pay more than you think it's worth.

Let's suppose you have placed a bid of 75 cents on a chair and no one has raised your bid. The person who raised you to 50 cents just now has backed out and the auctioneer cries, "Sold to the young feller in the jean jacket!" Now what do you do?

If you have bought a fairly small item, like a kitchen chair or a box of assorted items, the auctioneer's assistant will hand it over to you, and you will pay. You will notice that many adults simply give their names. This means they will be buying a fairly large number of things and will settle up at the end of the sale, or when they want to go home. For you it is simpler to pay as you buy; this way you will be able to keep a better check on how much you are spending.

It is surprising how soon you can run out of money when it seems you are getting everything for nothing, or close to it!

One word of warning: Farm auctions are definitely addictive, so be prepared. Once you start haunting farm auctions, you may never again have a free summer!

GAMES N' THINGS



BY JIM DEACOVE

Without the right promotion very often a good game idea dies unnoticed. Large game companies regularly spend tens of thousands of dollars just *developing* a "hot prospect". GAMES N' THINGS intends to look at games both on the market and those that have merit but no recognition. If you have a game you think deserves attention, send it to your reviewer, Jim Deacove, R.R.4, Perth, Ontario Canada K7H 3C6.

This issue, let's look at games developed around concepts of land and forms of land holding.

From way back, and popular as ever, is the Parker Brothers board game called MONOPOLY. The game is titled, "A Real Estate Trading Game", but, in fact, little trading takes place and is often of little consequence anyway. Part of the attraction of the game, which continues to fascinate young and old, lies in the equipment itself. The board is attractive, the money, cards and movers are many-coloured and interesting to handle. My own children enjoy playing with the equipment more than the game itself. The other attraction lies in the psychological area. The idea is to gain complete control over the land and develop it in order to increase one's personal wealth, always at the expense of the other players. Cunning becomes the virtue used to drive the others into bankruptcy. There is room for daring and the roll of dice creates the excitement of fate's intervention at any moment in the game. Since our society conditions us, subtly when young and overtly when older, to compete for wealth and security against other members of society, MONOPOLY offers the opportunity for us to act out our fantasies of realizing quick wealth and controlling land. We can be somebody and experience the power of wealth (or the humility of poverty). If this seems far-fetched, just observe yourself and others the next time you play the game. Observe especially the person who wins.

When a person's consciousness begins to lose its appetite for competition and couples this change with greater care for the quality of interpersonal relationships, then games such as

MONOPOLY become very difficult to play. Eventually, they lose their psychological attraction. The fun of playing with the equipment could be modified into alternative forms of play. Let me suggest some rule changes. Going to Jail could result in Rehabilitation with the player being given some money and possibly some modest property or a building for another property. A new start in life! Partnerships could be formed between several players owning parts of a set of properties being put into a Credit Union fund to assist players who go bankrupt. The game could be won when all the players have all their properties fully developed. In other words, the underlying philosophy of the game would change from private control of wealth and property to one of creating sharing arrangements to benefit everyone.

On the market is a more recent land game called LAND GRAB. This is marketed by House of Games and is another colourful, well packaged item. Generally, House of Games consistently produces attractive and clever game ideas and seems to have dominated the board game market in the last five years. LAND GRAB'S very name reveals the underlying philosophy of this creation. The subtitle softens the impression — "The Game of Land Assembly and Development" — but the playing of the game reinforces the GRAB aspect. Players compete for lots of land and try to develop the land they buy with commercial and residential units. The person who develops a gigantic arena is the winner. The other players, while trying to create their own developments which earn much revenue, by shrewd purchasing and building interfere with the other players' intentions. The game moves quickly and allows for some competitive strategy. The plain board soon fills up with handsomely illustrated little pieces representing developments. The arena is the largest piece of all and requires the most acreage to build. There is play money in big denominations and cards to pick up. Given the obvious philosophy toward land, the game works very well. However, if one is questioning the validity of grabbing land and slapping up developments in order to make big money quickly, then two things happen. First, the game loses its fun value, since it is difficult to play a game just as a game irrespective of its educational and cultural implications. Secondly, the aggressive and hustler mentality required to succeed when playing becomes distasteful. You have to play a false role in order to participate. A trace of self-spoofing is present in the game because of the exaggeration of the

"GRAB" quality, but not enough to diminish the competitive mental set you must adopt to play it.

Hard to find is yet another game that involves land and our attitude to it. How many people have ever played ALGONQUIN VOYAGEURS? Not too many, I would venture, have even heard of it. I have rarely seen it in any game shop over the years, perhaps because it has not been trumpeted around through the usual advertising channels. I was once told by a shopkeeper in Ottawa that if a game or toy has not been advertised on TV it was hardly worth stocking. When he used the word "worth" he meant it in the only narrow sense he knew. For me, ALGONQUIN VOYAGEURS is worth stocking partly because the game concept is interestingly displayed on the board and in the cards and also because the very approach to land has a wholesomeness, even affection, often lacking in other games. The board is a map of Algonquin Park. Complexity and beauty is suggested in the colourful map face. The players are going on a trip into the Park and returning as quickly as possible and during the voyage on the waterways they try to earn points. Perhaps "learn" points is more apt since the game is educational in a fresh way. Often educational games turn out to be a terrible bore and the parent or teacher is hard-pressed to keep up a cheery front with the children, falling back on tried and tired truisms such as, "But this game is so educational! And, my, aren't we learning a lot!" ALGONQUIN VOYAGEURS teaches the players about ecology, camping, plants, animals, respect for the land and water, about woods and boating skills, and so on. The cards are well illustrated and create interest. The game is limited in one respect, though; the cards soon become familiar after frequent play. The creator might consider issuing new cards to add to the deck. More importantly, I would criticize the game for a needless structuring of competition between the players.

Games produced in our society are based on the premise of competition and games such as MONOPOLY and LAND GRAB absolutely require this premise in order to work, although some imaginative modification can soften the ugliness of this as suggested previously. But ALGONQUIN VOYAGEURS works so well without the competitive element that I wonder why the creator included it. Possibly he thought it would not be accepted as a game otherwise. Our family quickly forgot about the competitive element and went ahead with our voyages, talking to each other about our cards and sharing what we had found out.

On the outside looking in is a game called PADI created by Kit Nicholson and put out by Cumbria Beacon Ltd., 101 Christchurch Road, London, SW14, 7AT, England. This is a simulation game and as with most simulation games the contents are a few simple sheets of printed paper that give the players the bare gist of the game to be played. The rest relies on the interaction of the players. PADI (meaning rice) is a simulation model representing subsistence farming in India. Players are in a village 300 miles west of Calcutta, part of a family of Ho Tribals that has a village school just subsisting too. The land is in poor condition and few resources are available. Varying weather conditions create the game's primary tension. PADI presents an in-depth educational opportunity to learn about subsistence farming and about life in an Indian village. The rules are flexible enough so that competition in order to succeed is not an essential factor. Ways and means for co-operation are possible between players. The underlying approach to land rests on a nuclear fam-

ily concept with each family having a plot of land to develop, but nothing prevents families from experimenting with alternate forms of ownership. The game contains graphs and a sketchy map of land allotments. Definitely a game for senior students and older players, especially for those with a strong interest in Third World Affairs, those preparing for work overseas in villages, those studying this aspect of geography and agriculture.

Perhaps PADI could inspire Canadian game inventors. I could see off shoot simulation models about family farming operations in Saskatchewan, small town economics in Manitoba, Native people settlements in the North, and Maritime interdependencies as some possibilities. The added value of a game such as PADI is the further ideas it stimulates.

NEXT MONTH: WAR AND PEACE GAMES

THE COOPERATIVE SPORTS & GAMES BOOK by Terry Orlick (Random House, 1978).

The subtitle of this book explains it all—"Challenge Without Competition". Terry Orlick's home base for creating and collecting these non-competitive games is an Ottawa university. The book features over one hundred games for people of all ages, to be played in many settings, from livingrooms to the beach. The basis for these games is the premise that people should play together, not against each other—and an active imagination. They carry on somewhat in the same vein as *The New Games Book* (see article NL number 14). Nobody loses, more room for more people to participate, lots of activity, and room for personal achievement, but no one sitting on the bench.

Some old games (particularly those for young children) have been adapted and reworked to make them less competitive and more enjoyable. There is a section of cooperative games from other cultures.

ACCESS TO ALTERNATIVE SCHOOLS

These are only the schools that we are aware of—it's not necessarily a comprehensive listing. If you know of others, please write us.



AHNEEN
492 College Street
Toronto, Ontario, M6G 1A4

ALPHA
275 Broadview Avenue
Toronto, Ontario, M4P 1W1

ARGYLE SCHOOL
30 Argyle
Winnipeg, Manitoba

BLACK EDUCATION PROJECT
355 College Street
Toronto, Ontario

CAMELSFOOT
Lillooet, British Columbia

CAPE BRETON SCHOOL
RR 1
Orangedale, Nova Scotia

CARCROSS COMMUNITY
Box 26
Carcross, Yukon, Y0B 1B0

CITY SCHOOL
550 West Tenth Avenue
Vancouver, British Columbia

THE COMMUNITY SCHOOL
Wilno, Ontario

CONTACT SCHOOL
203 Oak Street
Toronto, Ontario

COOL SCHOOL PROGRAM
Room 1R1
Health Sciences Center
McMaster University
Hamilton, Ontario

COUNTERPOINT SCHOOL
142 Lewis
Ottawa, Ontario

DREAM MACHINE SCHOOL
Dundurn Educational Workcentre
Box 962 Station A
Hamilton, Ontario

ERIN LANE SCHOOL
Box 337
Toronto, Ontario, M5S 2S8

EXIT ALTERNATIVE SCH.
450 Millbank Drive
London, Ontario, N6C 4W7

GOAT MOUNTAIN SCHOOL
New Denver, British Columbia

HALIFAX SOUTH OPEN SCHOOL
1685 Lower Water Street
Halifax, Nova Scotia B3J 1S3

HAWTHORNE BILINGUAL SCHOOL
14 Vaughan Road
Toronto, Ontario M4W 2T6

INGLENOK SCHOOL
54 Farnham Avenue
Toronto, Ontario M4V 1H4

KINGSTON COMMUNITY SCHOOL
Princess Street United Church
corner of Princess and Albert
Kingston, Ontario

LIFE SCHOOL
6 Trinity Square
Toronto, Ontario

LOTHLORIEN SCHOOL
357 Pail Mail Street
London, Ontario

MULTI-AGE GROUPING UNIT MAGU
200 Wilmington Avenue
Downsview, Ontario

NARAMATA CENTER
Box 68
Naramata, British Columbia

ODYSSEY HOUSE COMMUNITY SCHOOL
225 Church Street
St. Catharines, Ontario

RADIUS TUTORING PROJECT
527 Senenth St. East
Saskatoon, Saskatchewan

ST. GEORGE'S SCHOOL
3685 The Boulevard
Montreal, Quebec

ST. JOHN'S CO-OP SCHOOL
298 Portugal Cove Road
St. John's Newfoundland

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REGIONAL



REPORT

ALBERTA BEAT

by Susan Burton

RED DEER RIVER DAM CONFRONTATION — About forty central Alberta farmers are continuing their fight to save 6,400 acres of farmland from flood waters and seepage that will be caused by the proposed Red Deer River dam project. The landowners have taken a stand to refuse to allow government-hired seismic crews on their land in order to conduct testing before the final stages of dam design are completed.

Although the provincial department of environment is now in the process of hiring such companies, it seems to be adopting a wait-and-see attitude to avoid a confrontation with the farmers on the threshold of a provincial election, claims a farmers' spokesman.

About forty of the fifty farm families that will be affected by the dam belong to the Site Six Association and have said they will refuse to sell their land. Two parcels have been sold and several other landowners have been approached to sell their property on the outside fringes of the affected area.

An association spokesman predicts there could be mass demonstrations should the government move seismic crews into the area.

The controversy over the location of the dam has been boiling for about two years now. A brief presented two years ago to the government contained 1,158 signatures opposing the construction of the dam at Site Six, west of Innisfail, and the government's own Environment Conservation Authority recommended the dam be constructed at another location, Site Eleven west of Sundre, where it would be environmentally less damaging.

A year ago, the government decided to build at Site Six, and ultimately disbanded the E.C.A. It hopes to negotiate with the farmers for a fair price

for the land, which will not be required until 1980, but if the farmers do not cooperate, expropriation could be the only recourse.

Meanwhile, the Site Six Association is gathering information in support of its stand. An association spokesman says they have been told the Red Deer River dam would be in an identical situation to two Idaho dams, both of which have broken within the last seven years.

The association claims the real reason for the water management scheme is to supply water to Saskatchewan to make up for the failure of the Oldman River, due to a dam there which will irrigate an additional 2000,000 acres of land in the south.

It says a Site Eleven dam would hold sixty per cent more acre-feet of water and would not require the energy which will be used by pumps required to control seepage on 2,000 acres in the Site Six area.

For more information on the Site Six dam protest, contact: association chairman Lynn Kelly, R.R. 3, Innisfail, Alberta (403) 227-2460.

CANMORE CREEK PRESERVATION — On a smaller scale a group of Canmore residents have formed an Environmental Action Group to try and preserve a creek flowing through the picturesque Rocky Mountain town.

Developers have proposed to backfill the creek, and an IGA store now has zoning approval to build on land leased at the entrance to the town which would entail backfilling, according to a spokesperson.

The action group recently attended a council meeting at which the backfilling proposal was introduced, but council did not approve the plan. Future plans include monitoring upcoming council meetings and generating town interest in the preservation scheme.

For further information, write Environmental Action Group, c/o P. Farrand, Canmore, Alberta.

ALBERTA'S ONLY WOOL MILL OFF AND RUNNING — Prairie Wool

is the home-grown product of a venture into the custom woollen mill business by a couple of Alberta weavers. But its atmosphere is really more of an oldtime cottagecraft industry than a modern-day cold, hard business.

Bill Purves-Smith, Fen Roessingh, and their four children live in an old train station that is being remodelled beside a quonset building housing their mill, on eight acres east of Carstairs.

The idea for the mill was launched by the news that the owner of the only other mill in Alberta at Magrath wanted to retire. As spinners and weavers, the couple had been taking their wool to him. Gradually they accumulated the massive carders and spinner from that mill, and other carders and a washing machine from another closing mill at Sifton, Manitoba. They have now been operating for just more than a year.

In the homey, visitors-welcome atmosphere, Purves-Smith, Roessingh, and several helpers fashion cold country comforters and quilts, using their own or your custom materials. They also produce quilt and spinning batts; unplied and untwisted strands of "spinning rolls" wool that are great for spinning weaving and knitting Cowichan sweaters, mitts and toques; and roping-thick, soft continuous cords of carded wool. All their wool is local, which Purves-Smith says is better quality than the overwashed and inelastic imported variety.

For a per-pound charge, the mill accepts wool from craftspeople and sheep raisers across Canada to be washed and carded into the desired form. Prices are 60 cents a pound for washing, \$1.25 a pound for carding, \$4.50 a pound for spinning rolls in white, grey and browns, \$6 to \$15 for sewing comforters made from your own wool and covering. For more information, contact Custom Woollen Mills Ltd., R.R. 1, Carstairs, Alta. (403) 337-2221.

FOOD-AWARENESS PROJECT — "Stuffed or Starved" is an eight month long food awareness project funded by

the Canadian International Development Agency and the Alberta Council for International Co-operation. Its aim is to inform the public on nutrition, malnutrition, gardening, farming, and food trade, distribution, and production at local, national, and international levels.

To that end, the project is sponsoring a two-day food awareness exposition October 20 and 21 at Central United Church, 7 Ave. and 1 St. S.W., Calgary. Project organizers want to promote and encourage moves to "Back to the garden", organic farming, and natural foods. Groups such as Consumer Affairs, natural food co-ops, organic gardeners, those concerned with third-world agricultural development and nutritionists and home economists will appear at the exposition, which coincides with "Food Awareness Week" Oct. 15 to 22 in Calgary.

The project is looking for groups who have an exhibit, display, or presentation to offer for display in the exposition, particularly in areas of food growth — for example, greenhouses, organic farming, fruit growing and drying. It will aid with expenses and the booth is free.

Accompanying the two-day event will be a food symposium where experts in the food field and the public can discuss and exchange ideas and issues, as well as a continuous showing of NFB and CBC films on food-awareness themes.

On a longer range, the Stuffed or Starved project plans to establish a resource and referral office where the public may obtain information on food issues, and to compile a multimedia report and evaluation of the project and its effects to submit to various agencies and government departments. To participate in the exposition or for more information, contact: Stuffed or Starved, 204, 223 12 Ave., S.W., Calgary, ALTA. (403) 266-6121.

Natural Life has a large readership of Albertans who would like to hear more of environmental issues, alternate lifestyles, and any other events and ideas that might be of interest. If you have such a contribution that you would like to see included in this column, please contact: Susan Burton, R.R. 2, Sundre, Alberta. TOM IXO (638-2387).

more Alberta news....

submitted by Heather Miyauchi

ENVIRONMENT NEWS is published bi-monthly by Alberta Environment and each issue deals with a specific

topic aimed at increasing the awareness of environmental issues among Albertans. The April/May issue probed recycling of materials that most households accumulate: glass jars, tin cans, beverage containers, old newspapers. For subscriptions contact: Environment News, Alberta Environment, 9820-106 Street, Edmonton, Alberta, T5K 2J6.

RECYCLING OLD BUILDINGS — The Alberta Historical Resources Act may designate an Albertan building or site as a Classified Historic Site. Designation places a responsibility on the owner in matters of alteration, development or disposal and may also provide for assistance in the proper management and preservation of the site. There are several thousand buildings and sites in Alberta, whose age, architecture or association with important events makes them a significant part of our heritage. These are non-renewable resources that should not be left to decay, nor thoughtlessly destroyed. If you know of such a building or site contact: Alberta Culture Historic Sites Service, 4th Floor, 10158-103 Street, Edmonton, Alberta T5J 0X6. The Historic Sites Service may wish to add it to their lists for future consideration. (from "Heritage" magazine, March/April '78).

Ontario Report

by Wendy Priesnitz

ACCESS TO SUNLIGHT—to mark the May 3 Sun Day celebrations in Ontario, an important government discussion paper was released. Since existing law in Ontario and many other areas provides no automatic "right to sunlight", protection of access to the sun could become a matter of concern as we increase our use of solar energy. This discussion paper is a step toward protecting solar access in Ontario, outlining the existing law and looking at the possible legal methods for protection of access.

The Ministry of Energy is seeking comments on the paper from municipal land use planners, academics, solicitors, and any individuals interested in the future of solar energy. Copies of the complete working paper *Perspectives on Access to Sunlight*, or the summary, can be obtained free of charge from Publications Centre, Ministry of Gov't. Services, 880 Bay St., 5th floor, Toronto, Ont., M7A 1N8.

WINTARIO LOTTERY FUNDS TO ENVIRONMENTAL RESEARCH—Ontario's provincial lottery trust fund is now funding a study by Toronto's York University scientists who are attempting to determine which chemicals or combination are responsible for any biological or mutagenic activity. This new study is part of fourteen health-related environmental projects now financed by lottery money.

EMPLOYMENT IN A CONSERVER SOCIETY CONFERENCE—Fifty Canadians—environmentalists, economists, educators, labour, management, M.P.s, civil servants—were brought together by the National Survival Institute at York University in Toronto for a weekend to discuss employment in a conserver society. Invited from coast to coast, they were men and women from many backgrounds who were seeking practical means of moving from a consumer to a conserver society.

The conference used the definition of conserver society proposed by the Science Council of Canada. Employment was taken to mean "any kind of occupation useful to our society or contributory to a sustainable, congenial way of life". Participants discussed present problems and potential for employment in farming, fishing, manufacturing, construction, utilities, transportation, tourism, recreation and social services.

A report on the conference is available from the National Survival Institute, 2175 Victoria Park Ave., Scarborough Ont., M1R 1V6.

ENTROPHY INSTITUTE—A relatively new publication called *En-Trophy* is directed and edited by Ross Hume Hall PhD (author of *Food for Nought*) and biochemist at Hamilton's McMaster University Medical Centre. It is aimed at helping its readers gain expertise in evaluating the impact of food choices on human biology, as well as the policies that guide those choices.

There are in-depth essays on pertinent topics using a wholistic approach to nutrition. Much of the content of this newsletter format publication is in the form of evaluation/critiques of advertisements and articles in various food trade magazines.

This paper is bimonthly with a price of \$17.50 per year for a subscription. Contact: En-Trophy Institute, 20 Hilton St., Hamilton, Ontario, L8P 3K2.

From The Island

by Jim Wyatt

ARK TAKE-OVER — The Institute of Man and Resources, the non-profit corporation set up to develop renewable energy resources on P.E.I., has announced that it will be taking over the operation of The Ark at Spry Point, P.E.I. The announcement, made jointly by Andrew Wells, the Director of the Institute, and Dr. John Todd of The New Alchemy Institute, is subject to the approval of both boards of directors and a federal/provincial government committee responsible for renewable resource development.

The change in management was apparently necessitated to better employ the funds available and to avoid duplication of effort in areas of common interest. Fortunately The New Alchemists are still to be involved with the Ark as consultants on scientific and technical matters and will extend this activity into other areas of I.M.R.'s many interests. Hopefully the close association between P.E.I. and the New Alchemists will be continued.

NO NUKE POWER FOR THE ISLAND — Premier Campbell's government announced in the throne speech that P.E.I. would not enter into a bilateral agreement with the province of New Brunswick to purchase power from the Point Lepreau nuclear plant. However, the reasons given for taking this step were that the province would be in a better position if it purchased power through the Maritime Energy Corporation, an organization of the Maritime Provinces dedicated to developing the energy sources of the region. Unfortunately, one of the energy sources that the Maritime Energy Corporation will apparently be involved with is nuclear. The initial area of interest for the M.E.C. seems to be tidal power, though, and perhaps this will attract their attention away from trying to bring Nova Scotia and P.E.I. into the nuclear club or increasing New Brunswick's commitment to their nuclear program.

A great deal of the credit for keeping the facts of the nuclear power situation and government plans in that area in front of the public belongs to the HOPE (Help our Provincial Environment) environmental group, who have held informational meetings and have sponsored a pamphlet entit-

ed "Nuclear Power and P.E.I." HOPE also puts out a newsletter keeping members up-to-date. To contact, write HOPE, c/o Tony Reddin, New Dominion, R.R. 2, Cornwall, P.E.I.

ECOLOGICAL AGRICULTURE CONFERENCE — It was a real happening and contained all the ingredients to make it the success that it turned out to be. With a large, interested audience, a long list of impressive speakers on interesting topics, and some fine organizational work, the P.E.I. Conference on Ecological Agriculture was bound to achieve the aims of the organizers. The conference was the combined effort of the Provincial Dept. of Agriculture and Forestry, the Institute of Man and Resources, and the New Alchemy Institute (P.E.I.) and took place at the Farm Centre in Charlottetown. Crowds estimated in the hundreds attended the different sessions spread over a three day period. The only disappointment that I heard voiced was that too few of the people who are considered farmers (in the modern commercial sense of that word) were in attendance and that the people who did attend were those already committed to ecological agriculture.



Among the most interesting of the speakers were the farmers from different parts of the U.S. and Great Britain who shared their experiences with composting on a large scale, weed control without sprays, biological pest control, soil nutrients, etc. One of the striking aspects of this group was the size and quality of their farming operations. Without exception they were using ecological methods on farms which would have to be considered large by the standards of their home areas. All these farmers kept livestock and therefore could be called "mixed farmers", but it was the *only* category into which they all would fit. The types of livestock involved in their operations varied from dairy goats to beef cattle, draft horses to registered dairy cattle; their crops from soya beans to grass, corn silage to grain. They included Sam Mayall

of Shropshire, England; Richard Thompson from Boone, Iowa; Harvey Considine of Waterloo, Wisconsin; and others.

Among the other speakers at the conference was Dr. Steve Manley of the Forestry Branch of the P.E.I. Dept. of Agriculture and Forestry, who gave a very forceful but unfortunately a very pessimistic over-view of the state of the forests and woodlots of P.E.I. Dr. Manley left little hope that the Acadian mixed forests could ever be restored.

Hopefully the same group of sponsors will get together to repeat this type of conference next year. Perhaps over a period of years other Island farmers will join those already converted to ecological agriculture.

SHORT NOTES — A new brochure entitled "A Most Prudent Ark" about the Ark experiment at Spry Point, P.E.I. is available from the Dept. of Fisheries and Environment in Ottawa.

If you are planning to visit the Maritimes and want to include the Ark in your itinerary, make certain you drop in on Sunday between 2:00 and 5:00 in the afternoon. Unless things change, that is the only time the doors are open.

There is a library on alternate energy at the Institute of Man and Resources and it is available to the public. If you call ahead it will give the staff a chance to dig out the material in which you are interested.

The P.E.I. Dept. of Agriculture and Forestry has made available wood on crown land at the price of \$2 per cord. The only catch is that the wood is standing and after being assigned your area to cut; you are obliged to cut everything within that area. Even at that, the price can't be beat. The idea is to have areas cleared for reforestation with improved stock from the provincial nursery.

The Rural Development Council has announced that availability of a tape/slide presentation entitled "Small is Beautiful" which apparently applies some of Schumacher's ideas to the Island context. It examines concepts of self-sufficiency in the social setting of P.E.I. It is available to Island groups through the R.D.C. office at the Main Building, Office 409, UPEI campus, or by phoning 892-3568.

Zero Day, which is an annual occasion on P.E.I., was a success this year. People are encouraged through advertising, to use as little energy as possible for that one day. This year's electrical consumption was down almost 120,000 kilowatt hours from Zero Day last year.

SASKATCHEWAN REPORT

by Zack Gross

EARTHWORM ASSOCIATION FORMING — Earthworms, a gardener's best friend for creating fertile soil, are becoming as much a business as a pleasure these days. Many publications are now advertising worms and their castings for sale and there are many new books on the market explaining both the benefits of having an active worm population in your garden and also telling you how to go into the worm growing and selling business. There are just a few worm growers in Saskatchewan and they are in the process of setting up a Saskatchewan Worm Growers Association. Their goals are to make the use of earthworms in soil improvement better understood by the gardener and to create a market for worms in the province. For more information on worm use and availability, and on the Association, contact Cyril Scheske, Box 206, Lemberg, Sask., phone 335-2290.

ALTERNATIVES PUBLICATIONS AVAILABLE — The University of Regina Department of Extension has just published a list of publications on alternative agriculture, technology and energy sources that are for sale through its offices. Included in the list are:

"Basic Notes on Organic Gardening in Saskatchewan", 1978 Revised Edition, \$1.20 plus 20 cents postage (by Paul Hanley)

"Composting for Farm and Garden", 1975, 25 cents plus 10 cents postage (by Stuart Hill)

"Reading References on Ecological Agriculture: Eight Annotated Bibliographies", 1976, \$1.75 plus 30 cents postage (by Stuart Hill)

"Biodynamic Farming", 1962, \$3.25 plus 20 cents postage (by Dr. E.E. Pfeiffer)

"Energy and Reality": Three Perspectives, 1977, \$1.50 plus 10 cents postage (by Jim Benson)

"Environmentally Appropriate Technology: Renewable Energy and Other Developing Technologies for a Conserver Society in Canada", 1977, \$3.75 plus 40 cents postage (by Bruce McCallum)

"The Renewable Energy Handbook", 1976, \$1.80 plus 30 cents postage (by Energy Probe)

And this is just part of the list! Address your orders, cheques and requests for the complete list to University of Regina — Extension, Regina, Sask. S4S 0A2; phone 584-4817.

PRAIRIOTOPIAN AND EARTHCARE PUBLICATIONS COMBINE — "The Prairiotopian", a Saskatchewan-based monthly newsletter on ecology and community, now includes the Earthcare Group's newsletter in its mailings. This makes for well-rounded, interesting reading. Betty Ternier Daniels will continue to edit "The Prairiotopian", while Rose Campbell (P.O. Box 392, Lumsden, Sask.) edits the Earthcare section. For a year's subscription, send \$6 to Betty at Box 118, Cochin, Saskatchewan.

NATIONAL ALTERNATIVE CELEBRATION CAMPAIGN UNDERWAY IN U.S. — Five years ago, an "Alternate Christmas Catalogue" was published in the U.S. It talked about living and celebrating more simply and suggested many charitable and social action groups that would be more appropriate for gift money than large department stores or corporations. Two more editions of the Catalogue followed and a national campaign, quarterly newsletter and book service were established to address the many questions and topics related to alternative lifestyle, and to divert money away from commercially extravagant celebration and overconsumption and into human needs projects and social change work.

In Canada, a group inspired by the American Catalogue, published a "Canadian Alternate Celebrations Catalogue" in the fall of 1975. All 5000 copies that were printed have now been sold. The Canadian Catalogue looks at ways of celebrating, eating, playing, gift-giving and learning that are Earth—and life—supporting.

Now, due for release in the late summer of this year, is the new edition of the "Alternate Celebration Catalogue" (U.S.) as part of a renewed national education and action campaign. Organizers hope that local groups will address issues related to personal and social change in their own communities, using the new Catalogue, an action guide and other support materials available from campaign headquarters. The culmination of this effort will be on Christmas Day (our time of heaviest buying and consumption) with countless local happenings and national media coverage.

To get an "Alternate Celebration Catalogue" and/or the organizing kit, contact Bob Kochtitzky, National Alternative Celebrations Campaign,

4274 Oaklawn Drive, Jackson, Mississippi 39206. To get the "Alternatives" newsletter and booklist, contact Alternatives, 1924 East Third St., Bloomington, Indiana 47401.

MODEL COMMUNITY IN THE MAKING — The town of Wilcox, Saskatchewan, with a population of two hundred is thirty miles south of Regina. Several local people are attempting to make it a conserver community. Wilcox's interest in these matters is not only locally based, but is also founded on global concerns. Over the past year, groups of students from across Canada, taking part in the Katimavik exchange program, have been working on community clean-up, insulation and wind generation projects. They also took on the joe-jobs at the Human-Scale Alternatives Conference in Regina last November. Over the winter and spring of this year, resource people met with Wilcox residents and Katimavikers at the town's Notre Dame College to learn about and discuss alternative lifestyles on a broad scale. Also, a Wilcox cooperative garden is in the works. The hope is that these smaller projects and educational sessions will create a growing interest in the town in alternate sources of energy, appropriate technology, natural diets and so on. For more information on Wilcox's aims and activities, contact Chris Mansbridge, Notre Dame College, Wilcox, Sask., phone 732-2080.

RECYCLING COOPERATIVE OPENS IN REGINA — The Phoenix Recycling Cooperative, with the objectives of establishing a collection and drop-off system for recyclable material creating jobs, promoting consumer conservation and contributing to community development, has just begun operation in Regina. It is a community-based, non-profit service which accepts paper, cardboard, glass, bricks and other solid wastes. Each year, more than 70,000 tons of solid wastes are collected municipally in Regina at a cost of 2.5 million dollars, so this is your chance to prevent energy wastage and to support a less cluttered environment and lower taxes. Membership in the co-op is \$1.00 and volunteer help is most welcome. The Market Square Food Co-op and the Phoenix Recycling Co-op, now share warehouse location. This will give both groups more space in which to operate and will mean greater contact and co-operation among their members. There is still room for other alternate groups in the warehouse and, hopefully, this might be the beginning of a centre for like-minded activities. The new address for Market Square

Food Co-op and Phoenix Recycling Co-op is 2220 Dewdney Avenue, Regina; phone 525-5960 and 525-5575 respectively.

QUALITY REFINISHERS SET UP SHOP — A creative and energetic company of young furniture restorers has located itself in the town of Tugaska in Southwestern Saskatchewan. Russell Rudd, who graduated from a course in refinishing at Winnipeg's Red River Community College, is proprietor of the shop, "Furniture Friends", and is teaching several local classes in the art, as well. With the help of Manpower on-the-job training grants, he has assembled a small staff and they find themselves very busy meeting the needs of people in the Moose Jaw area and around the Southwest. If you are interested in taking Russ' course or have an antique, broken or unsightly piece of furniture that you want restored, contact Russell Rudd, "Furniture Friends", Box 4, Tugaska, Sask. (phone 759-2128).

LIFESTYLE COURSES SET TO BEGIN — Autumn means the beginning of schooling for young and not-so young alike. If you're looking for courses, generally on lifestyle issues, or specifically on health, healthy eating, solar energy, home insulation, the conserver society and many other topics relevant to personal and social change, contact the University of Regina Department of Extension, College and Scarth, Regina (phone 584-4817), the Regina Plains Community College, 1808 Broad St., Regina (phone 569-3811), or the Community College office or local representative nearest you.

WORKING FOR A HEALTHY SOCIETY — Healthy Horizon's Saskatchewan's two-year old preventative health organization, has now reached a membership of over 1000. It has local chapters in Regina, Saskatoon, Yorkton, Nipawin, Carrot River and Weyburn and produces a quarterly newspaper from its editorial offices at 609 Temperance St., Saskatoon S7N 0M4. Monthly meetings are held for members and interested people on such health issues as vitamins, fluoridation, food additives, allergies and organic gardening. Membership fee is \$5.00 per year. The regular fall convention is planned for Fort Qu'Appelle, Sask. the weekend of October 13 to 15. For more information, contact the provincial headquarters of Healthy Horizons Association, 166 Franklin Drive, Yorkton, Sask.


REACTION TO URANIUM REPORT GROWS — The Cluff Lake Board of Inquiry, presided over by Justice E.D. Bayda, has brought down a report favourable to uranium mining interests in Saskatchewan. The two-volume, 1000-page report glosses over the health hazards of uranium mining and waste disposal, saying that current safety standards are adequate. It also says that supplying uranium to corporations or countries that might use it for armaments manufacture is not a moral issue for Saskatchewan. The report contends that it is not our concern what the uranium is used for. If we don't supply it, then somebody else will.

As well, say Justice Bayda and his two colleagues who travelled all over the province to hear the testimony of corporations, unions, pol-

iticians, citizens and others, uranium development will enrich Saskatchewan and create jobs in the North. Both of these ideas have been disputed by anti-nuclear groups who say that the profits will go to foreign multinationals and southern Saskatchewan interests. They add that long-term jobs will, for the most part, be available to the skilled technician only, while northerners will get, at best, hazardous or short-term work.

Since the report came out in early June, anti-nuclear groups throughout Saskatchewan have been remobilizing after the long wait for Bayda's decision. Research, informational programming and local organizing are now being done to counter the Cluff Lake Report, to collect funds for the work ahead and to plan for possible future direct action. For more information on the nuclear debate, or to get involved in whatever aspect of the campaign most interests you, contact one of the following groups: the Saskatoon Environmental Society, P.O. Box 1372, Saskatoon (phone 665-6655); the Saskatchewan Coalition Against Nuclear Development, 134 Avenue F South, Saskatoon (phone 652-1571); or the Regma Group for a Non-Nuclear Society, 2138 McIntyre St., Regina (phone 522-6619).

ZERO-CHEMICAL AGRICULTURE TOPIC OF FALL CONFERENCE — Zero-Chemical Agriculture is the topic of a conference to be held Monday and Tuesday, October 30 and 31 at the Echo Valley Centre near Fort Qu'Appelle, Sask. The conference is sponsored by several provincial and federal government departments, the University of Regina Extension Department



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and a number of citizens' environmental and agricultural groups. Workshops and plenaries will be designed for people concerned about chemical use in agriculture and will focus on the "how to" of organic methods. Some areas of discussion will include soil improvement through manure managements and compost, green manuring and crop rotation, and use of municipal wastes; and weed control through cultural practices, interplanting, mowing and grazing.

A major guest speaker will be Richard Harwood, Director of Research at the Rodale Experimental Farm (where Organic Gardening & Farming magazine is published). For further information or to register, contact the University of Regina Department of Extension, College Ave. and Scarth St., Regina; phone 584-4817.

WE GET LETTERS.....Jerry Messmer and Shirlea Smith of Lloydminster, on the Saskatchewan-Alberta border, write to say that they read the Saskatchewan Report first in Natural Life and want more news from rural areas. So, rural Saskatchewan, please tell me what's happening in your area! Jerry, a teacher, and Shirlea are interested in vegetarianism, organic agriculture, goats, natural birth control, midwifery and rural co-operative living. Like-minded people in their area might like to contact them at 5111-54A Street, Lloydminster, Alta. T9V 0S4; phone (403) 875-7053.

BOOK STORE/MEETING CENTRE OPENS IN SASKATOON — Onion, Books, a non-profit bookstore, has just opened in Saskatoon. It will provide access to books not always easy to find in that city and hopes to become a community discussion and meeting centre. Books for sale will focus on such topics as organic gardening, alternate technology, women's issues, labour and Canadian history and literature. The store will also sell periodicals, records and children's books. Onion Books is open Thursdays from 11 a.m. to 9 p.m., and Friday, Saturday and Sunday from 11 a.m. to 5 p.m. It is located at 650 Broadway Avenue (near Five Corners), Saskatoon S7K 3L3; phone 665-7611.

PRAIRIE FOOD CO-OPS CONFERENCE SET FOR REGINA — The Third Annual Prairie Food Co-operatives Conference will be held in Regina on Thanksgiving Weekend, October 7 to 9. Delegates from ten food co-ops in Manitoba, Saskatchewan and Alberta will meet to share ideas on procedures in the day-

to-day running of a co-op and to establish the means for greater communication among themselves. As well, large-scale warehousing and buying, on a prairie-wide basis, will be given priority for discussion.

Prairie co-ops met last year and agreed to form a federation. A charter was drawn up, outlining the reasons for, goals of, and criteria for acceptance into the federation. Starting with this year's meeting, these principles will be put into practice.

Delegates from British Columbia food co-ops will also be in attendance at the Conference and any other Western group thinking of establishing a food co-op is welcome to send representation. A committee of fifteen people from Market Square Food Co-op in Regina is organizing the conference. For further information, contact Wilfred Allan, 2216 Smith St., Regina; phone 523-7527.

EARTHCARE INFORMATION CENTRE ESTABLISHED — The Earthcare Group has recently received a grant from Saskatchewan's Department of Agriculture to set up an information centre to answer questions and disseminate resources on organic farming. The staff will also promote organic farm management, help find local markets for organic food and organize regional groups of farmers and gardeners. Further financial assistance is needed for the work of the centre there is public demand and support. Send your donations or queries about organic agriculture to the Earthcare Information Centre, c/o Paul Hanley, Box 1192, Wynyard, Sask. SOA 4T0.

NEWS AND VIEWS

FROM B.C.

by Louise Price

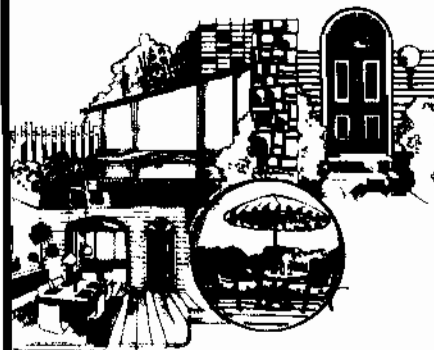
THE HAZELTON-KISPIOX VALLEY CO-OP has now opened a long awaited storefront Outlet called Folkstore. The store is a result of months of work done in renovating the building which is located next to Tri-Angle motors in the heart of Old Hazelton. The store will offer the people in the surrounding area good food at low prices and will be open Tuesday to Saturday. Staffing will be done by volunteers who by working two hours every three months will be entitled to a discount.

THE PRINCE GEORGE RECYCLE-RESEARCH group is well on their

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feet after working on a federally-funded Canada Works grant for the last nine months. They have spent this time researching the feasibility of recycling in Prince George and other northern communities as well as looking into efficient and economical methods of utilizing the wastes generated locally. The plan so far looks like volunteer depots in smaller communities with recyclables shipped to Prince George and then either processed or shipped out in bulk. This should eliminate the problems small communities have had to date on the cost of shipping small amounts. The group has gathered a large quantity of information on waste handling, technologies available and the emergence and progress of recycling all over North America and Europe. They plan to put this material into a report available for libraries, schools businesses etc.

THE PEOPLE'S FOOD COMMISSION is growing in the northwest, though active work seems to have slowed down for the summer. The Smithers group is working at passing out literature at the local weekly flea market and are working towards a booth at the three day fall fair in August. Hopes are for a public meeting in each community in the fall. The following is a list of contacts in the northwest: Betty Mathews, Box 254, Burns Lake; Rick Olding, Box 2749, Smithers; Tom Knox, 3-5189 Ackroyd Terrace; Bonnie Blacklock, 203-309 2nd Ave, Prince Rupert, and Marcel Poulin, RRI, Kispiox Valley, Hazelton. Fact sheets on food production in the Bulkley-Nechako region have been produced by the Smithers group and are available upon request.

NUTRITIOUS URBAN TREES SOCIETY—A small Vancouver group is dedicated to the planting and use of public food trees in that city. The group, whose name shortens to NUTS, asks, "Why plant a flowering plum or horse chestnut on the boulevard if you can't eat the end product?" They had considered supporting fruit trees but the parks people said they required too much pruning and were generally "too messy". Walnuts don't like the climate in Vancouver but hazelnuts thrive in the city and produce a very usable food. The parks board people didn't want to clean up after them either, so NUTS has re-directed its energies toward planting around schools over cinder chips where clean-up is less hassle.

N.L.

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By Lawrence Solomon With a Foreword by Ursula Franklin

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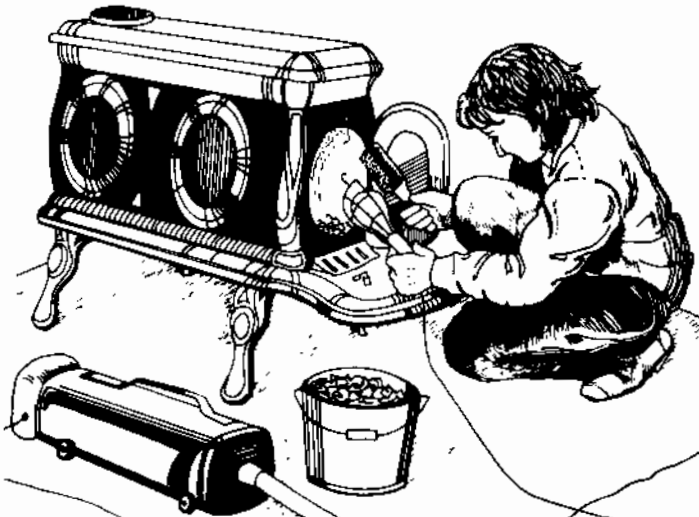
ACCESS TO BOOKS

BOOK REVIEWS

PROGRESS AS IF SURVIVAL MATTERED, edited by Hugh Nash (Friends of the Earth, 1977). From the foreword to the book: "The kind of country and world a growing number of people want — and indeed, the kind we all require for sheer survival — will be less populous, more decentralized, less industrial, more agrarian. Our anxiously acquisitive consumer society will give way to a more serenely thrifty conserver society, one which relies most on renewable resources and least on the irreplaceables....The unraveling of the earth's heritage of resources can be stopped....by the attitudes and steps our contributors espouse...."

Ideas in this book come from many varied fronts in the form of essays by a number of "dedicated activists" committed to keeping the earth liveable. It is, in essence, a how-to-do-it book of applying conservation conscience to many fields of human activity; it's subtitled "A Handbook for a Conserver Society." Some of the areas discussed are public health, education, transportation, environmental law, natural resources, energy, agriculture, food and nutrition.

This is a very positive book — it believes that there is a way for the joyous survival of our planet, and sets about sharing the authors' and editors' hopes and ideas. Borrowing from the Science Council of Canada's conserver society insights, this synthesis of ideas from many varied people offers many concrete solutions, recommendations to government and much food for thought.



from Chimney and Stove Cleaning, Garden Way Bulletin A-14

CHIMNEY & STOVE CLEANING by Curtis and Post (Garden Way Bulletin A-14, 1977). This is a very concise and down-to-basics guide to an important subject for the many people who are using wood stoves. After briefly but convincingly telling why it's necessary to regularly clean your stovepipe and chimney, the authors undertake a complete start-to-finish description of a regular maintenance program for your heating and cookstove.

Then onto the roof for chimney cleaning out. The booklet ends with some tips to insure safe, clean wood burning. It's an excellent guide for wood stove owners — veterans and novice alike — will save you a mess at least and your house at most.

THE GREAT NUTRITION ROBBERY, Beatrice Trum Hunter, Charles Scribner's Sons, N.Y., 241 pages, hardcover

THE GREAT NUTRITION ROBBERY is an indictment of food technology gone mad, producing pseudo-foods which will fool people into thinking that they are consuming nutritionally valuable foods when, in fact, they are consuming simulated, synthetic, and imitation foods that may be dangerous to their health. It is also an indictment of government policies which encourage food processors to develop inferior foods that can be sold at a higher profit.

Unless people regularly read the food technology trade journals, they cannot possibly conceive of what is happening to our food supply. For example, "cherries" used in some pies and cakes are actually calcium chloride-coated alginate with appropriate artificial colour and flavour. "High-fiber" breads contain powdered cellulose, a by-product of the wood pulp industry. And cookies have been made experimentally with ground-up chicken feathers replacing as much as ten percent of the flour.

Many new terms have come into usage that the average person has never heard of: Filled milk, extruded foods, TFGB (tissue from ground bone), CBTS (cooked beef-fat tissue solids), NPN (Nonprotein nitrogen) and DPW (dried poultry waste) for feeding cattle. All of them have three things in common: They are lower in nutritional value, they make more money for the food processors, and they are potentially dangerous over the long term.

Nutritionists have repeatedly emphasized the importance of eating a wide variety of foods in order to obtain all necessary nutrients. But the extensive use of imitation and synthetic ingredients narrows the base. If an individual eats fake chicken from textured vegetable protein on Monday, fake tuna fish from textured vegetable protein on Tuesday, fake ham from textured vegetable protein on Wednesday, fake turkey from textured vegetable protein on Thursday, ad infinitum, the nutrients will be greatly limited.

Similar basic constituents appear in many guises in the new foods. Highly saturated coconut oil is not only in nondairy whipped toppings and creamers, but also in imitation cheese, imitation nuts, and imitation chocolate. To make all the new fake foods palatable and acceptable, the use of flavourings and artificial colours has skyrocketed. At present, more than twenty American companies devote their skills exclusively to the production of flavourings, and some of the major food processors produce their own. One flavour producer sold \$200 million worth in 1974.

THE GREAT NUTRITION ROBBERY documents how people are being ripped off on a scale that beggars all description. There are chapters on "Restructured" fruits and vegetables, egg substitutes, imitation cheeses, infant formulas, meat "Analog", adulterated bread, margarine, synthetic vitamins, animal feeds, and dairy products, among others. One chapter discusses Real Food — An Endangered Species, and another demonstrates how the Food & Drug Administration Favours and Encourages Imitation Food Manufacture.

This book should be read by every person who eats. It should outrage those who are forced to eat in institutions and it should be an eye-opener for those who are free to choose their food.

reviewed by Alfred H. Wertheim
Editor, Natural Food Associates, Inc.
Tarrytown, N.Y.

BUILDING THE CORDWOOD HOME by Jack Henstridge (Jack Henstridge, RR No. 1, Oromocto, N.B., 1978). A few years ago, the Henstridge family was suddenly left homeless because of a fire. Faced with rebuilding and little money, Jack and family designed and built a cordwood house — wood stacked fire-log style and held together with mortar.

This book is the story of the design process and construction of this unorthodox 3,000 square foot house. There are many tips, photos and sketches of the house, the way it was conceived, and the actual building process that make it a useful tool for building such a house. Cordwood construction is simple, energy efficient, fire resistant, soundproof, and very low cost. It should be considered if you're planning a house and Jack Henstridge will convince you that it's a good idea.

SUN! A HANDBOOK FOR THE SOLAR DECADE, edited by Stephen Lyons (Friends of the Earth, 1978) was prepared as a handbook in conjunction with Sun Day this past May. This pocketbook features the writings of such well known authors as Amory Lovins, Denis Hayes, Howard Odum, Ivan Illich, Barry Commoner, Lewis Mumford and William Shurcliff. This makes the book a collection of intelligent essays about "soft" energy alternatives. It is a strong argument in favour of the practicality and necessity of an energy policy which favours renewable energy sources.

The book seems designed to be accessible to the general public and then rally its support for renewable energy policies. It is a good introduction to solar energy with its representative sampling of solar articles. It isn't meant to be a manual for buying or building solar. But it succeeds very well at its task of presenting the wide range of positive reasons why we should, as a society, go solar. Let's hope it reaches enough of the right people.

EDIBLE GARDEN WEEDS OF CANADA by Adam Szczawinski and Nancy Turner (National Museums of Canada, 300 Laurier Ave., W., Ottawa, Ont., 1978). This newly published illustrated guide and cookbook is the first in a series by the National Museums on edible wild plants. It describes over forty common weeds found in gardens and along roadways. It indicates where they are found, how to recognize them (full-page coloured photos in many cases) and explains how to prepare them by means of simple recipes.

This is a lovely book, but a practical one. It is spiral bound so pages stay open, and well organized. Recipes are presented in both metric and cups and tablespoons. An appendix briefly describes weeds to be avoided and defines the botanical terms used in the book. There is also an extensive bibliography. This is destined to become a favourite wild foods guide.

GROWING WITH COMMUNITY GARDENING, (Mary Lee Coe, Countryman Press, 1978) is a new book designed as a handbook for the rapidly spreading community gardening movement. As such it is a valuable guide to the theory and practice of cooperative vegetable gardening.

Some history of the concept is presented, along with the spiritual and therapeutic values of it. Profiles of existing projects are included as well as practical guidelines, sample budgets, enrollment forms, site plans, planting charts, and bibliography.

Solid information, practical suggestions, and useful illustrations make this a valuable guide for garden clubs, community groups, communal homesteaders, and anyone else interested in the theory and practice of group gardening.

— NL —

THE BOOK HUNTER



by Beatrice Trum Hunter

DRY IT, YOU'LL LIKE IT! by Gen MacManiman (Living Foods Dehydrators, Box 546, Fall City, Washington, 98024, USA; softcover, 65 pages)

The drying of foods is an old tradition, and requires little or no technological knowledge. Originally people dried various foods by the use

of heat from the sun or fire. Sometimes they ground such dried foods and were able to carry such lightweight sustaining foods with them while travelling. In modern times, food drying has declined, except for drying of herbs. Commercially dried fruit has been subjected to much chemical preservation, with the use of sulfur dioxide, and/or fumigation with the use of bromide compounds.

DRY IT is a gem of a little book, telling how fruits, berries, vegetables, herbs, meat and fish jerky can all be dried at home, simply and effectively. For those who are interested in doing extensive amounts of drying, a thermostatically-controlled food dehydrating device can be constructed simply, and heated with an electric heater. Clear directions are given for the construction of such a dehydrator. The device can also be used as an incubator for yogurt or pot cheese, as a crisper for crackers, as a warming chamber to raise yeast breads, as a place to keep honey from crystallizing, and for other food uses.

For those who may not be interested in building a dehydrator, **DRY IT** gives other suggestions for drying foods, with general instructions

about the need for temperature controls, air movements, and ventilation. There are ingenious recipes for making fruit "leather", health treats for grandchildren (of all ages), granola, cookies, and a host of other goodies.

— NL —

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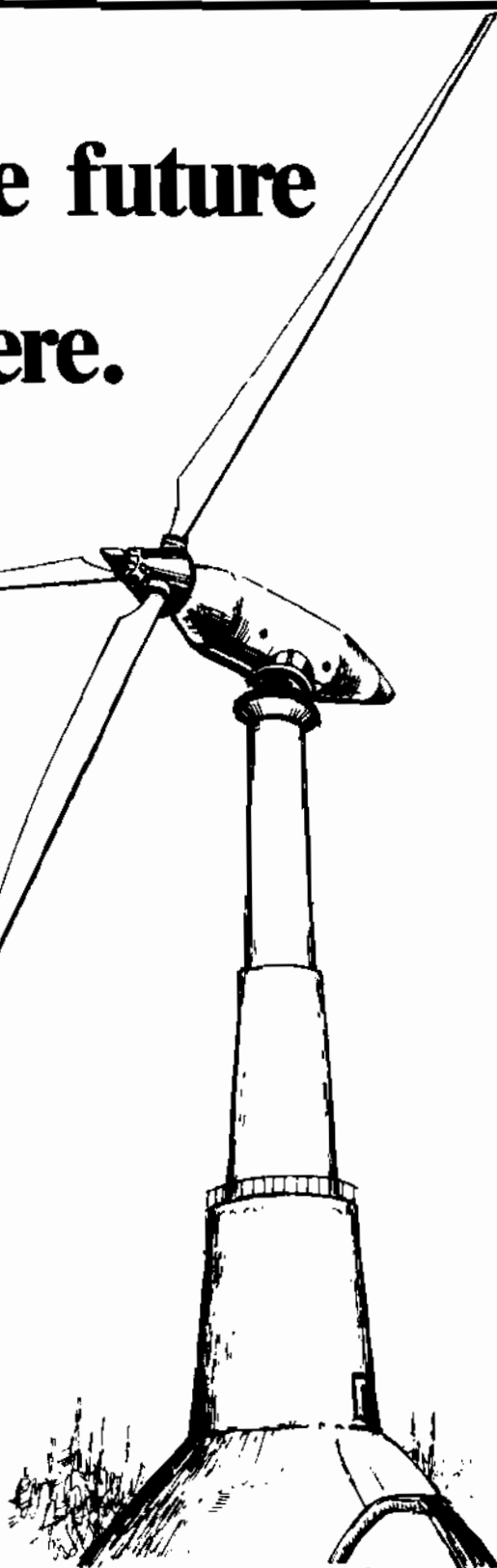
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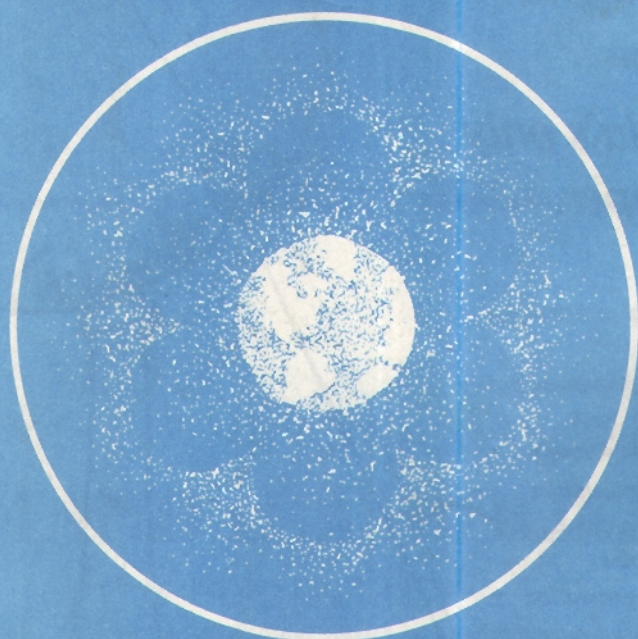
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