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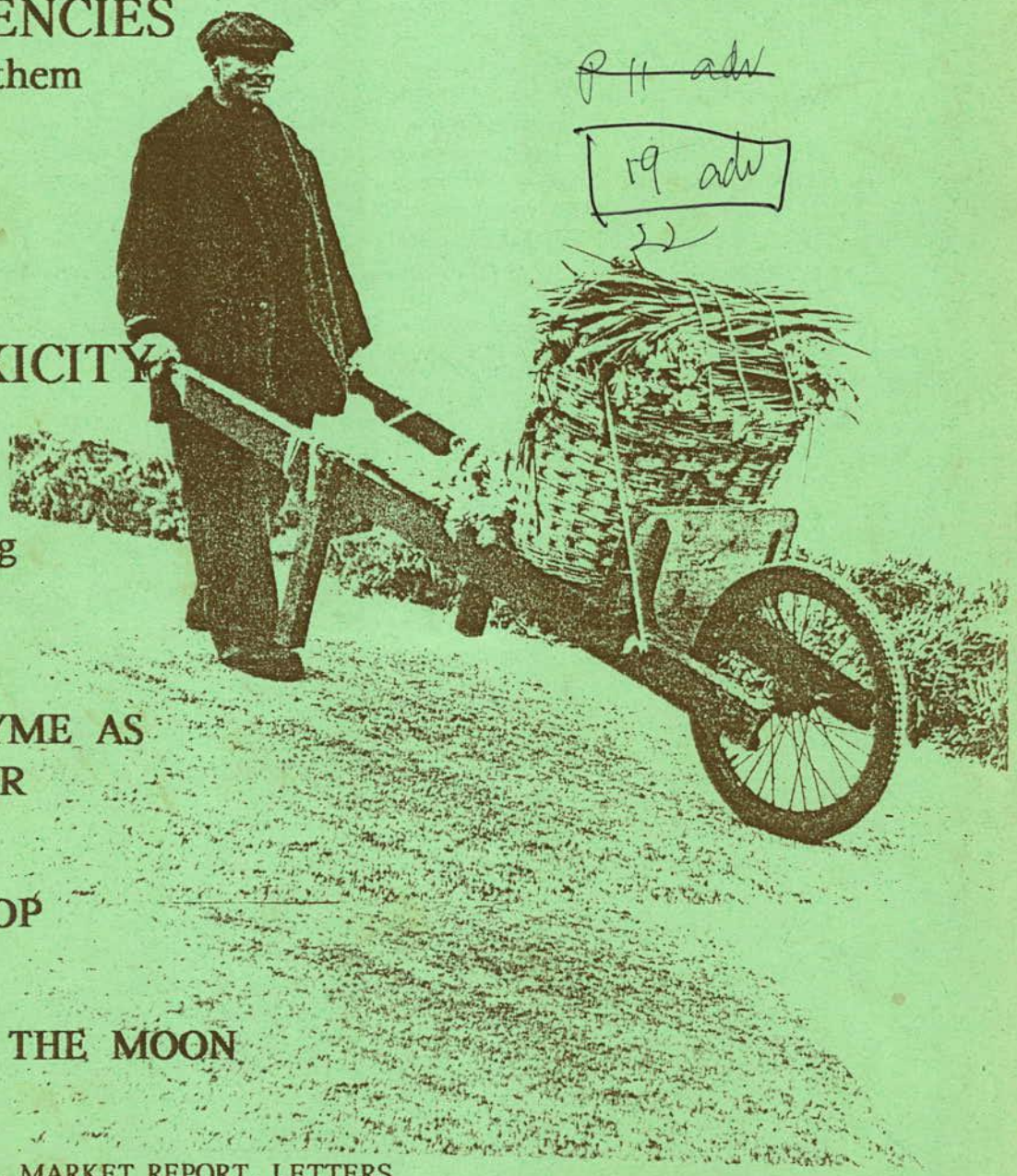
# HERB GROWER

PUBLISHED BY THE ORGANIC HERB GROWERS OF AUSTRALIA INC.



## *Inside This Issue:*





PLUS: GROWING HINTS , MARKET REPORT, LETTERS
INDUSTRY NEWS BRIEFS, CERTIFIED ORGANIC AND MUCH MORE.....

# EDITORIAL

*How's winter treating you? Even up here in the Northern Rivers it's really chilly some days with several night frosts hitting unsuspecting growers. One way to keep warm, of course, is gardening. I've done plenty of that, ably assisted by our volunteer Ken, who works us hard every Monday.*

*In this issue you will find lots of interesting articles. After several requests I wrote a lengthy discourse on soil and nutrient deficiencies. It proved too long for one issue, so I've chopped it in half, with the rest to go into the next issue. Quite independently Russell came up with his story about rock dusts; the two go well together. Andrew put a brave face on his basil-loss due to early frosts and wrote a great article on herbs and composting while Dave informs us how often we can harvest our crops.*

*In the OHGA exec meeting notes you will see that it's been decided to apply for a licence to grow marijuana commercially. As you will read in the H.E.M.P. campaign story, which was sent to us by The Cannabis Clothing Company, hemp has been a most useful crop for centuries. Growing up in Holland,I remember seeing hemp as a normal crop for farmers to grow. For the next issue I have another article about hemp, which tells us how prohibition began.*

*OHGA have taken part in several show-type events. 'Beyond Beef' was the alternative to the Casino Beef Week. There were many events designed to show the general public that life without meat and alternative farming is possible.*
*Then there was the really great World Environment Day at the Lismore City Hall, where we spoke with many interested and would-be herb growers.*
*Farmarama, the big ag show in Wollongbar, falls this year on 16-17-18 Sept. Last year we had a great stall and lots of fun. This year we plan to have two displays. One in a collective organic tent, with the main one outside in the nursery lane.*
*Anyone who wants to help (wo)man the stalls should contact our showman Dave Carey, who is in charge of the event as far as OHGA goes.*

*Now for some slightly bad news. Australia Post, not being happy with the profits they are making already, have decided in their wisdom to do away with bulk postage discounting. This means that posting the HERB GROWER to you will cost considerably more and the membership fee will have to go up by $5, to $20 per year. We regret having to do this, but there you go. Blame Australia Post.*

*Old members will realize that the OHGA membership year starts in September. That means, everyone, that you have to think of renewing your membership or subscription by the end of August.*

*Even though the Dept. of Ag is now quite interested in organic growing, we still get no support for the industry from the federal government. We all read about European governments subsidising farmers to switch over from conventional to organic farming. No such luck here. On a federal level they hardly even recognize that we exist. We have already spoken to our local Labor MP, who is personally very supportive and will do his best for us. If all OHGA members and other organic growers and those interested in organics would write to their federal MP, I'm sure it would make a difference.*

*Now for something else. Howard and I are getting involved in the Jarlanbah Permaculture development in Nimbin. Because we feel it's too far away to be going back and forth, we have decided to sell the herb farm here and relocate to Nimbin. You'll find a description of the house etc. in the classifieds, so if after reading that you are interested to talk to us about it, give us a ring.*

Ellie

Dear Editor,

In the interest of the herb industry as a whole, I think it is important to be as supportive as possible of each other. Divisions and competitive secrecy have been common for a while, understandably, but for real and substantial progress to occur in the industry, all sectors must be tolerant, including the growers, the marketers, the manufacturers, government rule-makers and researchers too.

I believe that genuine steps towards co-operation, sharing and pooling of resources are happening right now. The industry is changing and growing and a mature attitude will need to be maintained to ensure we don't waste another ten years by all struggling in isolation.

I was quite disappointed to read in the May/June 1993 issue (p.21) of HERB GROWER your strongly negative comments about the work at U.N.E. and the funding they have received. Whether or not the article were entirely accurate is of less importance than the final comment criticising herb research and academics. It is not the first time such attitudes have been aired, ie Jan/Feb issue (p.22). Is it part of the sadly Australian trait of anti-intellectualism, of knocking other, of cutting down tall poppies? The famous motto of the now-dead B.L.F. (Builders' Labourers' Federation) "Dare to struggle, Dare to Win" should not be forgotten.

'New Crop' researchers get plenty of criticism from outside the industry, they are constantly (daily) required to justify their presence and aims. They have been struggling for years to get some official recognition and perhaps some funding. Being marginalised in the various university agriculture departments is a part of life. I certainly applaud the hard work and successes of growers over the years. I know of many in Tasmania, Victoria, Queensland and NSW (& elsewhere no doubt) who have persisted with no support and against many obstacles. But I also applaud the hard work and successes of researchers over the years, decades even. I am tempted to cite a few names but that would only exclude some who are not so well known but who have nevertheless made important contributions to the industry.

I hope that we can all see the value of the work that others do, even if it does not seem to be Priority Number One in our own eyes. I would be interested to know what other members think about this.

Paul Kristiansen, Dept. Agronomy & Soil Science, U.N.E. Armidale.

## LETTERS TO THE EDITOR ET AL.

*For personal replies, please enclose a S.A.E.*

*Dear Paul,*

*Thanks for your letter. In the spirit of open-ness and cooperation that you mention, we invite you to write us a report on the work that UNE Armidale has done with the grant.*

*We put two pages in the next issue of HERB GROWER at your disposal and the same in the following issues.*

*EDITOR*



Dear Editor,

It has come to my attention that our Commercial Herb Cropping Research Program has had minor mention several times in your journal.

Naturally the whole program was not detailed and what was published was partly in error.

I would welcome the opportunity to provide you with a comprehensive article about our program for publication in your journal so your readers can be accurately and completely informed.

Yours sincerely,

R.S.Jessop, Associate Professor and Head, UNE ARMIDALE, Dept. of Agr. & Soil Sc.

*(This gentleman was offered a page, but has not made the deadline. Ed.)*

### OHGA EXEC MEETINGS AGENDA POINTS

- update on ongoing discussions about certification groups
- ads to be placed in other herb newsletters to make OHGA more widely known.
- to ask members to write to their local MP to complain about lack of support for organics
- submission to government for a license to grow hemp for value adding
- to approach schools and other educational institutions to promote the use of herbs
- stall at World Environment Day
- stall at Beyond Beef in Nimbin
- stall at the next Farmarama
- due to AusPost withdrawing their postal bulk subsidies, membership to go up to $20.

# HOW TO PRODUCE THYME FOR A GROUNDCOVER

*BY DAN R. ROBERTS*

Thyme isn't limited to culinary purposes. The hardy, sun-loving perennial, with its aromatic fragrance and delicate-looking lilac flowers, also is versatile in the landscape as a groundcover.

This versatility prompted Edgewood Farm & Nursery, a perennial and herb operation in Stanardsville, VA, to grow 72 varieties for its wholesale, retail and mail order customers.

Norman "Nick" Schwartz and son-in-law Bob Cary propagate more than 6,000 cuttings during a one-week period in late September. Timing is crucial. If thyme is propagated later in the fall or winter when natural light levels are lower, the failure rate is much higher.

Edgewood usually takes 1-inch tip cuttings. This can vary, however, depending on the variety. "You want fairly soft growth," Cary said. To ensure that they will have sufficient juvenile growth for cuttings, the business partners plant fresh stock plants each summer and cut them back with hand pruners twice a year to keep the woody stems sprouting green growth.

Cuttings are dipped in Hormodin No. 1 rooting compound and stuck into No. 128 plug trays filled with Sunshine's No. 5 plug mix.

Edgewood roots thyme under mist in a double-poly, free-standing X.S. Smith greenhouse equipped with 55% shade cloth. Bottom heat, while beneficial, is not crucial for root development, Schwartz said. He and Cary propate thyme at between 60 and 65 degrees F. Rooting time, depending on the variety, is three to six weeks."

"That's the easy part," Schwartz said. "The hard part is making sure you get them out from under the mist the minute they're rooted." If you don't, they will rot, he said.

Thyme requires ample sunlight and good ventilation to grow. It's especially important to grow it under clear polyethylene and not under opaque polyethylene. The light transmission is better, Schwartz said.

Schwartz and Cary transplant the rooted cuttings into 2 1/2 inch plastic pots in a growing media that they custom adjust, depending on the specific thyme variety.

"They all like a little bit of added dolomitic lime," Schwartz said. "All have to have fast draining soil."

Edgewood transplants its thyme into a media containing 60% bark and 40% Premier Pro Mix. The media is enriched with 13-13-13 Osmocote slow-release fertilizer. Desired pH growing range is 6.5 to 7.0

Native to European and Mediterranean climates and soils, thyme plants, such as those used in rock gardens, need a media with a gravel-like texture near the surface to keep them from rotting. Edgewood uses coarse chicken grit to accomplish this. (Poultry farms use the substance so chickens will be able to digest their food.)

Besides reducing the chance of crown rot, the chicken grit reflects light back up to the plant to promote a thicker canopy, Cary said.

"The key trick to growing thyme," Schwartz said, is good drainage.

After Schwartz and Cary transplant their thymes, they grow them on in homemade heated hoop houses covered with a single layer of clear polyethylene under temperatures no lower than 60 degrees F. Each house is equipped with a homemade wooden hinged vent at the end of the structure.

The vent is located at about pot height to promote good ventilation and reduce leaf diseases.

Watering technique is critical, Schwartz said. Growers should take care not to overwater. "More people kill herbs by taking care of them than anything else," he said. "They love them to death."

Development from transplanting to selling stage takes another six weeks, depending on the weather. The cooler the weather, the longer this heat-loving plant takes to reach a marketable stage.

During this time, the plants are trimmed once if they are to be sold wholesale and twice if they are to be sold retail, Schwartz said.

The perennial and herb nursery, which is located in the foothills of the Blue Ridge Mountains, sells wholesale to garden ceners from northern Virginia to Blacksburg in the southwest.

Edgewood's retail mail order business stretches throughout the United States.

"I wish all the plants grew as easy as these," Schwartz said. "They don't have insects that bother them."

Schwartz and Cary do have to watch for diseases. They use Cleary's 3336 systemic fungicide as needed on ornamental thyme such as *Thymus praecox*--a creeping form.

They also use Safer's organic fungicide as needed on culinary thyme, *Thymus vulgaris*.

As for growing thyme in the landscape, Cary and Schwartz recommend that the easy-going perennial herb be planted in an area where it will receive good sunlight and air movement.

*(From the HERBAL CONNECTION - Feb./March 1993)*

# SOIL AND NUTRIENT DEFICIENCIES

## *SYMPTOMS AND REMEDIES*

*PART 1*

IN THESE articles we'll take a look at nutrient deficiencies that can occur in the soil and what to do about them. If you've been an organic grower for a long time and you've raised your plants on a diet of home made compost, you may be lucky and have a well balanced soil. And balance is what it's all about. Too much of one mineral, can cause a soil deficiency in another.

Then there's the enormous variety in plants that we herb growers have to contend with. Especially when most of the herbs we grow originated in places which are completely different from the environment in which we plant them. It's always a good idea to find out as much as possible of the history of our herbs, so that we can imitate the soil conditions which each herb prefers.

### *MAGNESIUM*

Magnesium is essential for photosynthesis. It serves as an activator for many plant enzymes required in the growing process and is mobile in the plant, so it can be transferred from older to young tissue in conditions of deficiency.

It is important in plant nutrition for:

* maintaining a dark green colour in leaves
* regulating uptake of other nutrients
* carrying phosphorus in the plant
* promoting oils and fats in the plant

Symptoms of deficiency are:

* yellowing of older leaves
* curling of leaves upwards
* veins of the leaves stay green

Many herb growers have this problem with rosemary. A quick fix method is a cupful of Epsom Salts to a watering can. Water the rosemary plants from the top and you will see that they'll produce new green leaves very quickly. Then the application of dolomite will sustain the new growth.

These remedies have even brought me some success with the dreaded sage collapse. This winter I'm also going to put all our fire ashes around my rosemaries to combat a possible shortage of potassium.

### *CALCIUM*

Like us, plants need calcium for their skeleton, in their case the walls of their cells. Calcium influences plants as follows:

* promotes early root growth
* increases seed production
* increases strength in stalks
* maintains strength of cell walls
* neutralises oxalic acid produced in plants
* improves general vigour and strength
* encourages nodule formation in legumes
* regulates intake of other elements, such as phosphorus

Symptoms of deficiency are:

* failure of buds and root tips to develop
* abnormal dark green colour of foliage
* premature falling of blossoms and buds
* weakened stems

The best remedy is to give your plants a generous liming. Gypsum also contains calcium. If you have a hard clay soil, this will help open it up.

### *BORON*

If you live in a high rainfall area, you may well have a boron deficiency.

This trace element is important for:

* pollination and reproduction
* supply of oxygen to plant tissue and roots
* flower and seed formation

A shortage of boron shows as:

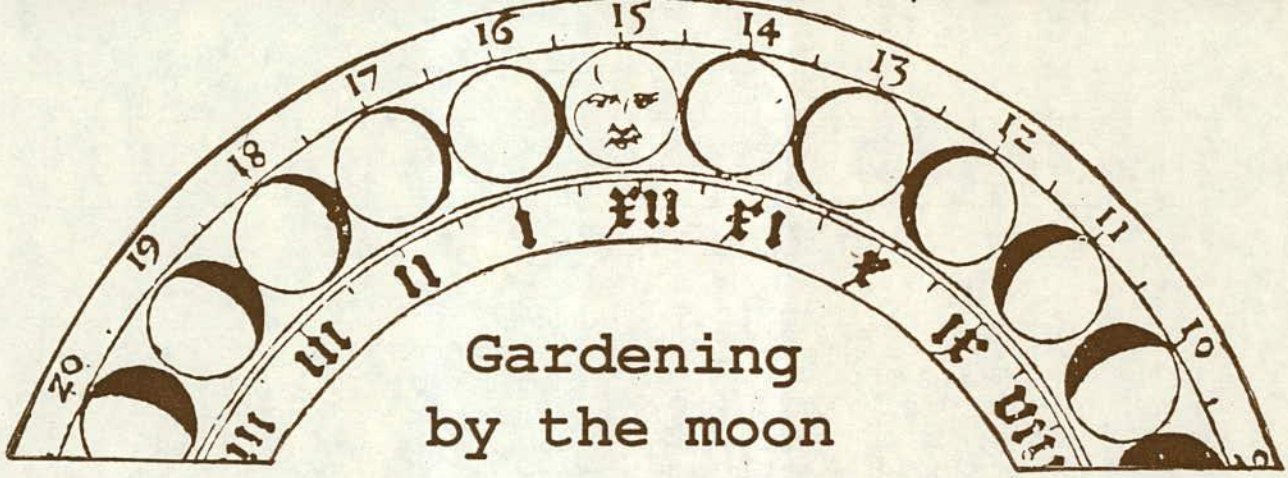
* death of terminal growth, causing lateral buds to develop
* thickened, curled and wilted leaves
* soft or rotting spots in fruit and tubers
* reduced flowering
* hollow stems and browning of vegetables such as cauliflowers
* crown canker in some plants

Over the years we've had quite a few growers complaining of crownrot in parsley. This sounds like a typical boron deficiency. The quick way to remedy it is to mix 1 tblsp. of borax in 10 l. of hot water, to let it cool and water it over your affected plants. Boron deficiency is often caused by too heavy liming. (We can't win, can we?)

### *POTASSIUM*

Too much nitrogen

*(further on page 9)*



# Gardening by the moon

## *JULY*

By Elle Fikke-Rubin

16-18 Time for a clean-up. Collect fallen twigs and branches and put them through a shredder, if you're fortunate enough to have one. If you don't, they can be burned. The ashes should be put to good use as snail barriers around garden beds or as fertilizer around banana trees. Potash is what these trees need more than anything. Due to the high alkalinity of wood ash direct contact with plants should be avoided at all costs. Ash can also be dug into a very acidic soil and will raise the pH considerably.
19 New Moon, which means no work.
20-23 With the moon in Leo and Virgo, both so called barren signs as far as the garden is concerned, it's the perfect time to look at ways to use herbs for winter ailments. Colds and flu's can be combatted by drinking teas made of camomile, pennyroyal (omit this herb if you're pregnant) elder flowers, licorice, rose hips, thyme, ginger and yarrow.
For fever use garlic, ginseng, echinacea, rosehips, parsley, peppermint, sage (also great for a gargle) valerian, yarrow, passion flower or parsley.
For coughs you can make your own thyme syrup by boiling 50 g of dried thyme or 30 g of fresh herb in half a liter of water for 10 minutes. Sieve and boil the liquid with one pound of rock sugar or a pound jar of honey.
For a really stubborn cough you can hollow out a large daikon radish. Put a large tablespoon of honey in it and sip the liquid that collects. Bits of horseradish eaten during the day will also get rid of a cough. Of course prevention is always better than cure. To keep any viruses at bay, daily use of Vit C., garlic and echinacea is important.
24-25 Days to plant or sow leafy annuals. Cabbages, cresses, winter lettuces can be grown in all districts, warmer areas can add silverbeet, dill, coriander, most kinds of lettuce, chicories like witloof and endive and mustard greens.
26 First Quarter, take the day off.
27-31 Seed bearing annuals and flower planting days. Peas, broad beans, fennel and, again, coriander and dill can be sown or planted. Dill and cabbage are good companions, broad beans grow well in the vicinity of marigolds and potatoes, but all peas and beans dislike being near any member of the onion family.

## *AUGUST*

1 Another day to plant or sow fruiting annuals and flowers. Shasta daisies, phlox, violas, marigolds, petunias, candytuft, alyssum and any flowers which your local nursery stocks, can be planted out.
2-3 Full Moon time, take these days off.
4-9 Time to plant perennials or to divide and replant them. If your area isn't too frosty, this is a good time to plant citrus trees. Parsnips, turnips, swedes, potatoes, carrots, onions, asparagus and rhubarb crowns, valerian root and other herbs grown for their roots can also go in now.
10-11 Last Quarter, put your feet up.
12-15 Days to weed, cultivate new ground and feed up your garden with liquid manure, Organic Life and, for long term mineral supply, with rock dust, such as blue metal.
16-17 Pruning and trimming days. All winter flowering bushes, such as poinsettias, bauhinias and flowering peaches, need a good prune. Elderberries, heliotropes, vitex, tibouchinas and bushy herbs such as lemon verbena

and lavender can all be cut back.
18-19 New Moon.
20-23 All these days, but in particular Sunday and Monday, are suitable for planting or sowing of leafy annuals. (see last month)
24-25 First Quarter, no work
26-31 Seed bearing and flowering annuals can be planted. Dill, fennel, aniseed, cumin, coriander and flowers such as carnations, cosmos, marigolds, nasturtiums, balsam, dianthus or begonias can all go in.

## *SEPTEMBER*

1 Spring starts with a Full Moon and a day off.
2-7 Time for perennials, trees, bushes and root crops. Sow carrots, radishes, parsnips, echinacea, valerian, spring onions, chicory, beetroot and most herbs. Perfect days to split up your oregano, marjoram, thyme, burnet, sorrel, sweet potatoes and other plants that are divided by root. Passionfruit, tuberous plants, bushes and trees can all be planted now. Water them in well and mulch them.
8-9 Two days off.
10-15 Take this time to feed up your plants, to take precautions against pests. Apple, pears and quinces, for instance, can be protected against coddling moth by hanging mothballs in the trees. Hang them out of reach of little hands, of course. Monday to Wednesday are good days for pruning and trimming.

HAVE FUN!



## RURAL INDUSTRIES RESEARCH & DEVELOPMENT CORP.

Many of our readers will have read of reference to this governmental body, commonly known as RIRDC. The RIRDC is a statutory corporation formed under the Primary Industries and Energy Research and Development Act of 1989. RIRDC mission is to enhance the sustained economic contribution of agricultural industries to the national economy. The operational philosophy of the corporation is to be innovative, catalytic and coordinative and to operate in close consultation with industry practitioners, their representative organisations, research institutions and expert individuals.

In achieving these aims RIRDC works with the smaller, new and emerging rural industries to organize and fund research and development which will facilitate growth. RIRDC's annual budget is $15 million dollars, of which the Commonwealth contributes 10 million and the balance is from industry levies.

Our industry is funded under the program title of "Spices, Herbs, Tea and Coffee." and has received to date, since 1989:

(1) Herbicides for use in fennel and peppermint. Tasmania Dept of Primary Industries $29,733.

(2) A Commercial Herb Industry for Northern NSW. University of New England, Armidale. $141,319.

(3) Herb Production in Tasmania Tasmania Department of Primary Industries $18,394.

(4) Prospects for Herb and Spice Production in Australia, Ian Hemphill RIRDC expert's report $10,000.

**MEMBERSHIP IS NOW $20**

ORGANIC HERB GROWERS OF AUSTRALIA Inc
P.O. Box 171, South Lismore, N.S.W. 2480

CERTIFIED Organic GRADE A

by RUSSELL QUINN

## "IS ROCK DUST O.K. TO USE AS A FERTILIZER/SOIL CONDITIONER AND IS IT ANY GOOD?"

These questions arise occasionally and the simple answer is: YES.

Although the term 'rock dust' covers a number of rock minerals, incl. the following: APATITE PHOSPHATE ROCK, DOLOMITE, GYPSUM, LIGNITE MAGNESIUM/MINERALS, GRANITE AND BASALT DUSTS, LIME, BENTOTITE, ATAPULGITE AND TRACE ELEMENTS, the term usually refers to the by-products of crushing gravel in quarries for the use as road base and in concrete. These rocks often are Granite or Dolerite (bluestone).

The richest clay soils on earth are derived from granite rock. It has been known for many years that the release of nutrients from weathered or broken down granite is very slow, but there is plenty of evidence to suggest that the process is greatly accelerated, making rock dust a useful fertilizer in warm moist biologically active soils. Where these dusts have 'failed' to show any fertilizing benefits, the soil was found to be lacking in organic matter and biological activity. Nutrients in rock dust are not in a form readily available to plants, so by feeding the living organisms in the soil, their benefit is passed onto the plants.

Rock dust does not contain very high quantities of the major plant nutrients. However, besides these levels of nutrients the dust often contain small but significant amounts of trace elements. Because these elements are in an insoluble form they are not leached from the soil. Provided the dust is fine enough, the soil micro-organisms slowly render them available at a rate which plants can effectively use.

The deep black soils of the Darling Downs in Queensland are derived from the basalt rocks of adjacent ranges. These soils have produced huge yields for 120 years without the application of conventional super phosphates or NPK fertilizers. The biological activity of such soils is so great, that the mass of organic waste on the soil surface simply composts in situ.

Rock dusts are available from quarries relatively cheaply, at around $15 a tonne. The nutrient value will vary, but as a rough guide, application rates on a small scale would be between 5 and 20 kg per 10 $m^2$. As rock dust releases very slowly, it only needs to be applied every 3-5 years. On a larger acreage, 5 tonnes or more per ha. initially, then every few years an application of 1 tonne p/ha.

These rock dusts, along with other elements mentioned at the beginning, can be very helpful additives to the organic growing patch, moving it towards increased soil life and health, which passes on to the plants growing in it.

I will be testing my new official certification vehicle (new motor bike with longer legs) in the near future. This test may involve a test of endurance for me as well. The plan is to do some annual visits on the New England Tablelands, combined with a couple of days camping in the Washpool N.P. Fred Allott of Glen Innes reports -3 C temperatures. That should remind me of the Southern Alps of New Zealand.

Keep warm, everyone!

*(continued from page 5)*

or phosphorus can cause a potassium shortage. Clay soils usually contain plenty of potassium but sandy soils especially in a high rainfall area, will run out fast. The primary role of potassium is that of an enzyme activator. It influences these processes:

* cell division
* synthesis and translocation of carbohydrates
* synthesis of proteins in growing plant cells
* development of chlorophyll
* opening and closing of leaf pores

Potassium deficiency greatly reduces crop yields. Symptoms include:

* tip and marginal burn, starting on mature leaves and moving to younger ones
* weak stalks, plants lodge easily
* small fruit or shriveled seeds
* slow growth
* less resistance to certain diseases, such as powdery mildew and root-borer moth damage in mint. Root rot and winter kill of herbs such as catnip occurs easily with an inadequate supply of potassium.

Pot-ash from your winter fires around your plants (but not touching the plant) will put potassium back into your soil. Comfrey liquid manure will help quickly. Use as a foliar feed. More compost will help too and placing comfrey leaves under mulch.

*PHOSPHORUS*

Phosphorus is plentyful in most soils, but can be scarce in acid ones. Those plant parts that grow rapidly use a lot of phosphorus. Plants need more of it in cold weather and it is further used for:

* root formation and growth
* hastening maturity
* cell division and reproduction
* flower development, pollination and seed formation
* increasing legume growth
* increasing protein and mineral content in grasses and legumes
* making plants winter hardy

Deficiency shows up as:

* slow growth and stunted plants
* purplish coloration of foliage in some plants
* dark green coloration with tips of leaves dying
* delayed maturity
* poor fruit and seed development

A good dressing of bonemeal or poultry manure, both rich in phosphorus, will remedy the shortage.

***This article will be concluded in the next issue, with a look at iron, manganese, zinc, copper, sulfur, molybdenum, cobalt and nitrogen.***

*ELLE*

## *DEVELOPING SUSTAINABLE AGRICULTURE*

by Peter Mitchell

**A TWO-DAY WORKSHOP**, held in Richmond NSW in mid-April, looked at the on-going processes that enable land-managers to move towards greater sustainability.

Farmers from diverse backgrounds reinforced the importance of planning and preparation with the long-term in mind. While this was seen to require vision, equally important, it became clear, is the need to read the sustainability indicators now.

A clear picture of current soil health, water quality, input levels and practices, precedes the monitoring process. It is this process that allows us to assess our impact and replan our intervention. Not only do we build onto the knowledge of our tools of trade, but we commit ourselves to their betterment.

Information sharing and an appreciation of non-financial rewards were common to all speakers.

Issues in bio-diversity, soil micro-biology and property management planning were addressed by specialists and delegates decided which issues they wanted to discuss in workshops.

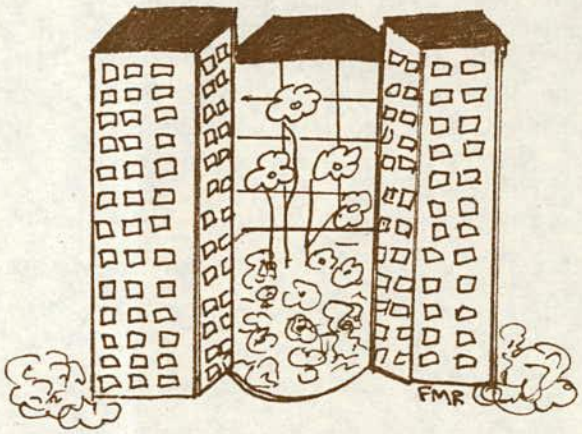
To stimulate the momentum of the shift to greater sustainability, we talked of setting appropriate goals, learning from experience and substituting knowledge and skills for inputs. Some perceived a paradox of self-reliance and community involvement; to take part in the sharing of experience was seen to stimulate social cohesion and foster a stewardship ethos.

By becoming part of the wealth and diversity of resources available in our environment, we can skill for improved decision making now, and the attainment of higher ideals sooner.

*(Peter is the OHGA organic certification officer for the Cooma district.)*

**MEMBERSHIP FEES DUE BY END OF AUGUST**

# *Shortcuts?*




## *PADDOCK ON TOP*
**by Kenrick Riley**

WHEN I depart this concrete crag in the Queensland sky for a slice of Northern Rivers heaven, one of the political implications will be choosing my loyalities in the annual State of Origin rugby league derby. Becoming a "cockroach" is almost unthinkable considering it is one of the few animals I choose to have a phobia about. But remaining a "canetoad" is no less unpalatable considering the irreparable damage that introduced species is doing to our native wildlife as it marches slowly but steadily across Australia's Top End towards Kakadu.

The canetoad was a shortcut which went horribly wrong. When it was introduced from Central America, it was supposed to "biologically control" a sugarcane beetle which had got on someone's goat. Unfortunately, the canetoad ignored its destined dinner and hopped off to make a meal out of our native frogs.

Another shortcut that concerns me is the growing concentration on genetic engineering in agricultural research. Laboratory plants are emerging which are "resistant" to some viruses, resistant to some pests and even - alarmingly - to some weedicides. When I read about any new fiddle with nature which purports to "solve" the problem of this or that "pest", I get an uneasy gut feeling that I am witnessing another shortcut. Another attempt to treat the symptom (the pest) instead of the problem (the unhealthy plant). Science developing a new product (which can be flogged) rather than a new process (which can be learnt).

Anyone who has used old carpet as a weed mat will be aware of the threat of residual chemicals. But I pricked up my ears while visiting a Toowoomba wool processing factory recently. This operation had ignored the wool doldrums and was developing new products such as roof and wall insulation which are naturally fire retardant and don't release toxic chemicals if they do burn. The owners had just started making a new product - a weed mat - similar to a thin carpet underlay but requiring no chemical input because it was not being placed in houses. They planned to pitch their new weed mat to compete with existing products such as plastic mulch, but were unaware of the potential organic market for a mat that contained no chemicals. Some of the advantages of a woollen mat are that it is a protein product which eventually breaks down to a fertiliser. It can also be impregnated with grass seed and spread over bare areas for quick regeneration. It is manufactured mainly from crutching type wools which have little demand in the garment trade and therefore will not rise much in price once the wool industry gets back on its hooves. And it is an Australian grown natural product - a bit of much needed value adding. Sounds too good to be true? Maybe not. But I had a nagging gut feeling again. While not pessimistic, I had to run this concept through the analysis chamber of the brain and see whether it might fall into the shortcut category again. Firstly, while no chemical is added during manfacture, what might already be there? Are chemicals used in the initial wool scouring process? What chemicals are used on the original sheep which might persist through the manufacturing process? Are there any residual noxious weed seeds which need to be considered? If one batch is chemical-free will the next batch be consistent? Does wool break down into any proteins which might impede plant growth? And so on and so forth.

You see, there is no real alternative but to send some samples off for analysis before any organic farmer even considers trialling it - even on a test site. Hopefully, the woollen weed mat will come up trumps for all concerned. If so, it will leave the realm of the agricultural shortcut. Because, in my experience, a lot of shortcuts merely lead to a long and arduous retracing of steps.

# HERB FARMS AUSTRALIA

With the onset of the cold winter weather, sales have increased dramatically to the southern capital cities. Prices have not yet climbed due to either recessionary forces, or the abundance of other growers. But it will only be a matter of time, before natural supply and demand laws, start to push prices upwards. It still amazes me that growers don't realise that it is in their best interests to work together, rather than to compete.

All the mediterranean varieties continue to be in good demand. The larger leafy herbs , which prefer the cooler climates are still being supplied locally. Sales of sweet basil have been falling due to lack of supply and end of season quality. Again there is a lot of competition from the North Queensland growers of Mareeba, who are airfreighting very large bunches.

Prices are stable with most varieties trading between 50 to 80 cents per bunch.

The Brisbane Market Authority recorded sales in April of 11,930 bunches of herbs and 47,460 bunches of parsley. And in May of 8380 bunches of herbs and 58,730 of parsley.

Still the most important element in maintaining our market position is quality. It is still essential to keep up the quality assurance system. The poorest bunch is a reflexion on the whole and puts all the good quality and hard work at risk.

Our new correspondent on medicinal herbs is Jan Phillips of HJ Langdons, who writes, "we have just passed a very interesting quarter, since the last issue.

All the common everyday herbal teas have been very quiet. Enquiries have all been for the exotic; example: cranesbill, blood root, stone root, queens delight, unicorn false root, violet herb, gravel root, zedoary, billberry fruits, pansy, white dead nettle, devils claw, siberian ginseng root.

Slippery Elm Bark powder is still a problem crop, as the USA is still the major exporter. Everyone (including this writer) wants to see the results of the crop due in next month. Elm trees are not being cultivated as much now as in days past. In this age of great breakthroughs in technology, one wonders why something so natural which has grown for centuries is now becoming so short of supply."

# SCULLCAP

by Howard Rubin

Continuing with our series of medicinal herbs which are in demand, we find another native American, **"SCULLCAP"**. This herb has an enormous potential here.

The scullcaps, as they are called, have about 90 species which belong to the genus scutellaria. The specific variety required is the Virginian Scullcap, ***scuttelaria lateriflora*** (LINN). This is a native North American species and sometimes goes under the name of madweed or mad-dog weed, as it is said to be a cure for hydrophobia (rabies).

The generic name is from the Latin "scutella" meaning a little dish, which is how one can recognize these species.

Scullcap is a perennial plant, native to the north eastern American states and Canada. It prefers a temperate climate, but will grow in the tropical mountains. It prefers wet ground, swampy positions, or river and creek banks.

The fibrous yellow rootstock produces a branching stem about one meter high, with opposite ovate serrate leaves that come to a point. the two-lipped flowers have inconspicuous blue or pale purple flowers which bloom during the summer.

Scullcap prefers quite ordinary soil, so long as it stays wet. Plants should be started off from seeds in early spring at a distance 15cm apart. Root cuttings can also be taken during autumn, but are best left in the ground undisturbed, and only divided when the plants have overgrown and are no longer producing abundant aerial parts. Once established the plants should grow for 3–4 years with no problems.

The whole herb (aerial parts) is used. It is collected before flowering in early summer. Average yields are ±4000kgs of green leaf which will dry to ±500 kgs dry weight per acre. The leaf needs to be dried at max. 30°C and is then powdered for sale. The most common form of sale is cut/sift ¼" screen.

The major active ingredient is a volatile oil known as scutellarin. Scullcap is one of the finest nervines ever discovered and may be used whenever disorders of the nervous system occur.

## HERBS FOR COMPOST

*by Andrew Tsikleas*

WINTER TIME is not all depressing for a grower. If you're hit by the first frost of the season, don't let it affect your enthousiasm for organic farming. If your basil gets killed by the frost, most of the bugs and grubs will also be killed.

Now is the time to prepare for spring planting and bed preparation. You also still have time to put in a mulch crop for late spring harvest. Oats are a good mulch crop. They inhibit the germination of many weed seeds. If you plan on expanding your herb area, you could put a crop of oats in to clean up a weedy patch. Slash it before the seed sets and then plough up the area and prepare your beds.

If you grow a few acres of oats you can get your crop baled. A small area can also be planted, then mowed and your mowings collected with a catcher or raked up. Rye grass can be grown the same way, but both oats and rye need some sort of nitrogen fertilizer (liquid, pellet or powder).

Also at this time of year, with big seas running with the southerly winds, there is plenty of seaweed washed up on the beaches for us to collect and add to our compost, or to make a liquid fertilizer with. (Wash the salt off first.) You could also lay the seaweed out on the lawn and run the mower over it. Finely cut with the grass, it breaks down quickly in your compost heap.

Seaweed is a good source of potash.

Those dead basil plants, killed by the frost, can be added to the compost. Other herbs can be used as green additions to the compost heap. Some will actually speed up decomposition, others will add necessary nutrients.

CHAMOMILE – both the annual and perennial forms can be made into a tea for ailing plants; chamomile is rich in calcium and, when added to the compost, will stop excessive acidification, thus speeding up decomposition and sweetening the whole mix.

COMFREY is rich in potassium, nitrogen, calcium and phosphates. In fact it is very similar in chemical composition to farmyard manure. The leaves can be added to the comppost heap or used as a direct fertilizer – either dig into trenches before planting such crops as potatoes or tomatoes, or soak several large leaves in water for several weeks, strain and use as you would any liquid fertilizer. The remaining sludge can be spread around as a surface mulch.

DANDELION is rich in copper, iron and potash, and so makes a valuable addition to the compost as well as hastening the maturing process.

NETTLES are rich in iron and nitrogen and they excrete silica, fomic acid, iron, proteins and nitrogen, thus improving the fertility of the ground in which they grow. They can be added to the compost or made into a tea as a liquid fertilizer.

TANSY will concentrate potassium in the soil and will add this vital element to the compost, as well as speed up de-composition.

VALERIAN increases phosphorus activity in the soil and also attracts earthworms. It provides a rich mineral content for the compost bin.

YARROW accumulates copper, nitrates, phosphates and potash and adds these to the soil where it grows, or to the compost heap. A few chopped leaves added to each green layer of the compost heap will dramatically reduce decomposi-tion time.

# Help End Marijuana Prohibition

**HISTORY** Until 1870, Cannabis HEMP was the world's most cultivated crop and its fibre the most traded commodity on Earth. Cannabis fibre, the strongest natural fibre known to man, was produced to supply the world's navies with all their sailcloth and rigging needs, as well as much of the world's paper and clothing industry. The seed provided fuel oil and a non-toxic base for lacquers, paints and varnishes.

With the advent of steam power, the need for cannabis declined. This was compounded by a lack of efficient hemp processing machinery, which made cannabis fibre expensive on world markets. Cheaper, though inferior fibres, such as jute and manilla hemp, were used as production costs were lower because of the exploitation of the local labour force. Cotton became more used due to the invention of the cotton gin.

In 1930 an efficient hemp processing machine, known as a decorticator, was developed and it became apparent that cannabis would again become a prominent crop in agriculture and commerce. This development seriously threatened the new petrochemical industries, whose synthetic fibre, nylon, had just been developed and whose chemicals were used to make wood pulp. Randolph Hearst, who owned the largest newspaper chain at that time, began a smear campaign against cannabis hemp. They renamed the plant 'marijuana' and began moves to vilify and eventually criminalise the plant. Harry Ainslinger and his drug enforcement agency, then facing loss of funding and jobs due to the end of the alcohol prohibition were recruited. Racial hatred against Negroes and Hispanics, then the main recreational users of cannabis, was used to whip up public hysteria, and the prohibition was introduced destroying the once great hemp rope, cloth, oil and paper industries. Prior to the prohibition, over 5,000 items of commerce were manufactured from different parts of the hemp plant. The American Medical Association vigorously opposed prohibition, but without success, as it would prevent them from using this plant to treat serious pain, nausea and muscular spasm.

**FIBRE** During the second world war, the United States Department of Defence, finding itself short of strong fibre after the Japanese occupation of the Philipines, began growing cannabis to provide this fibre for the war effort. Throughout the war years, hundreds of thousands of acres were cultivated annually to provide fibre for essential military and civilian products. A documentary film 'Hemp for Victory' was made to assist farmers grow this crop, described at that time by the U.S. Government as 'an ancient servant of mankind'. The fibre, being stronger, is able to be recycled more times than woodpulp. Cannabis can produce three times as much fibre as cotton and without the need for paraquot and other toxic chemicals, which have been linked to leukaemia and other cancers in cotton growing areas

**AGRICULTURE** Cannabis is a very beneficial crop - few plants produce more biomass than HEMP. It is autocompatible and can increase the quality of the soil due to its deep tap root, which remains in the ground after harvest. It is naturally resistant to insects and is an efficient smother crop, able to clear a field of weeds without the need for toxic chemicals. It can produce twice to four times as much fibre per hectare as woodchipping and requires less chemical treatment to pulp. Deadly dioxins are not produced with hemp pulp, as they are with timber pulp.

Special low drug varieties of hemp have been developed for industrial purposes, including cloth and paper production. The United Nations Convention on Drugs specificlaly exempts fibre hemp from prohibition, due to its large economic potential. For medicine, cannabis preparations have already been patented and are being used to treat glaucoma and severe nausea following cancer chemotherapy.

The Chinese have used HEMP to make paper for thousands of years. Until the 20th Century the majority of the world's books, including Bibles and Encyclopaedias were printed on hemp paper. United States Department of Agricultural research has documented that HEMP can produce four times more paper than forests. HEMP paper can be processed without chlorine, so dioxins are not produced.

'Kraft' paper mills are now banned in Europe due to recognised and potential hazards, yet in Australia they are the main type of mill under planning. The Japanese controlled woodchip industry and suppliers of chlorine and other pulping chemicals would be the main losers, if the Cannabis HEMP prohibition is repealed. The winners would be our farmers and the tens of thousands of people employed in this revived industry.

**ECONOMICS** The majority of unemployed and displaced workers from the timber and other failing agricultural industries, could be employed in a flourishing and viable HEMP industry. The woodchip industry is of no benefit to Australia. After logging to extinction large areas of native forest, the Forestry Commission has debts over $300 million. Cannabis fibre production would help alleviate the $700 million trade imbalance we have in processed paper goods.

Australia spends over $340 million each year and criminalizes over 50,000 people to suppress a plant that has been used by humanity for at least 12,000 years. The prohibition is of benefit only to the petrochemical companies, organised crime and to corrupt elements in the police force. After 50 years of chipping native forests, the Forestry Commission has nothing to show except scars on the landscape and debts of over $300 million, due to subsidies given to foreign companies and 'sweetheart' deals that have seen royalty charges not increase in decades. 200,000 hectares of hemp could completely replace the need for all woodchip, which is causing permanent damage to the ecology, whilst local production of non-polluting hemp paper would provide a real growth in employment.

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# GROWER HINTS

By Dave Carey

BY the time of reading this you're probably finding your garden cut out of some herb varieties. The frustrating side of this is that these are the varieties where the demand is high and prices are showing good form.

When can I harvest again?

How much of each variety should one plan to have during these months?

These are common questions discussed amongst growers. As a guide to these areas we need a general idea on how much time between successive harvests of a particular herb variety.

The information below is related to our experience of growing herbs on the North Coast of N.S.W. The periods stated are our average for plants growing under normal seasoning conditions.

| | SUMMER | WINTER |
|---|---|---|
| Basil | 10 days | 1 cut only |
| Chives | 10 days | 3 weeks |
| Coriander | Bolts | 1 week |
| Dill | Bolts | 1 week |
| Garlic Chives | 1 week | 2 weeks |
| Lemon Thyme | 2 weeks | 5 weeks |
| Lemon Grass | 1 cut each year | |
| Lovage | Dies back | 2 weeks |
| Mint | 2 weeks | 2 weeks |
| Oregano | 2 weeks | 6 weeks |
| Parsley | 2 weeks | 3 weeks |
| Rocket | 1 week | 2 weeks |
| Rosemary | 3 weeks | 6 weeks |
| Sage | 2 weeks | 6 weeks |
| Sorrel | 1 week | 2 weeks |
| Sweet Marj | Bolts | 3 weeks |
| Tarragon | 10 days | 6 weeks |
| Thyme | 3 weeks | 6 weeks |

If we take, for example: Rosemary .- A full bed of mature plants (40) . Say we harvest on June 1st, 80 bunches (50gms). The next harvest of another 80 bunches will be in approximately 6 weeks. For a grower to fill a demand of 8o bunches every week over this period , at least 6 beds of Rosemary are required.

To maintain a continious harvest from good healthy plants it will be necessary to regularly compost and mulch the beds. After each harvest would be an ideal time. Soil moisture monitoring to determine irrigation applications will also improve herb production.

**O.H.G.A.**
**CERTIFICATION OFFICERS**

If you want to be certified, you should ring the officer nearest to you. If in doubt, phone Russell Quinn.

Russell Quinn, 90 Billen Cliffs, Martin Rd, Larnook 2480
066-337056

Alan Bishop, South Arm Rd, Urunga 2455
066-551832

Tony Lonergan, Dorset Rd, Muswellbrook, Woodburn 2333
065-437618

Peter Mitchell, Old School, Peakview via Cooma 2630
064-543142

*Recently a number of magazines and newspapers printed a warning to all herb users about the American herb Chaparral. In this context we reprint a report by US herbalist* **Steven Foster.** *It appeared earlier in the US newsletter of 'ihgma', the INTERNATIONAL HERB GROWERS AND MARKETERS ASSOC.*

# HERBAL TOXICITY

## *RECENT DEVELOPMENTS*
### *by Steven Foster*

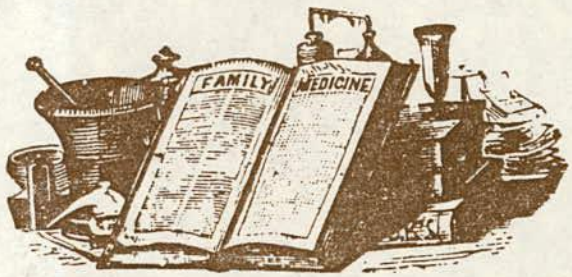
If you've been reading various herb newsletters, health magazines and scientific journals lately you may have run across a reference or two to reports of toxicity of a number of herbs. By now we should all realize that just because something is natural doesn't necessarily mean it is benign, even if it has been used for a long period of time with no apparent reports of toxicity. This is certainly true with comfrey and other retro-necine pyrrolizidine alkaloid containing herbs. Last year, in fact, the German BGA (their equivalent to the Foods and Drugs Administration) banned a number of herbs with toxic pyrrolizidine alkaloids, including Coltsfoot, Borage leaf, Golden ragwort (Senecio spp) and of course Comfrey, among others.

One of the things that the pyrrolizidine alkaloid situation has done is to alert pharmacologists and toxicologists to the possibility of certain natural products causing liver toxicity if used in sufficient amounts over a long period of time in susceptible individuals.

One herb that has been linked to causing hepatitis is Germander (Teucrium chamaedrys). Germander is best known as a semi-evergreen small ornamental shrub for American herb gardens, but in Europe it was used in a number of products. A tablet containing both tea and germander has been available in Europe as an appetite suppressant. In fact, in France it was registered for use for this particular purpose. A paper published in the 15 July 1992 issue of Annals of Internal Medicine by D. Larrey et al presented case reports of seven patients who developed acute hepatitis associated with germander ingestion. Long before the publication of this article the French Ministry of Health was aware of the possible problem with germander and had been monitoring it closely. By the spring of last year French drug surveillance centers had collected 26 reports of hepatitis associated with germander ingestion. Finally in April 1992, the French Ministry of Health prohibited the sale of the herb.

Unfortunately the story doesn't end there. In the 12 Sept. issue of *The Lancet* there is a report of a fatal case of hepatitis after the use of a germander product, despite the fact that the manufacturer had withdrawn the product from sale in February of last year.

Another herb to fall to the annals of toxicity recently is Chaparral Leaf (Larrea tridentata). Chaparral is a herb that has been sold in capsulated form for over 20 years, with hundreds of tons consumed with no reports of toxicity. Major uses of chaparral, a shrub which is very common in the Southwest deserts of the USA, include antioxidant, anti-inflammatory, anti-microbial and purported anti-tumor properties. The highly resinous leaves have a highly complex chemistry. The primary active component in the plant has long been believed to be NDGA (nordihydroguaiaretic acid). NDGA has been recognized as an anti-oxidant (basically a preservative) since the 1940s. A human study done in Latin America in 1955 involved intramuscular administered NDGA to humans in doses of up to 400 mg/kg for up to six months showing little toxicity. The compound was on the FDA's safe food additive list. However, in the late 60s animal studies showed toxicity to rats who were fed NDGA at 0.5% to 1% of their diet for 74 weeks, after which they developed cystic reticuloendotheliosis of the paracaecal lymph nodes and vacuolation of kidney tubular epithelium. A previous study had produced similar results to the lymph node symptoms reported above. These studies led the FDA to remove NDGA from the 'safe' list.




Since 1990 there have been at least three reported cases of acute or subacute liver toxicity associated with Larrea tridentata products in the scientific literature. At least four additional cases were reported last year. In a 10 December 1992 press release the FDA Center for Food Safety and Applied Nutrition issued a warning of the potential link between use of the herb and liver toxicity. Industry associations and organizations including the American Herbal Products Association, the Herb Research Foundation and others worked closely with FDA toxicologists and regulators to try to determine the cause of these cases. While no cause, effect

***continued on page 20***

* cdn phoned 7/9/93. will phone back.

*continued from page 18*

and mechanism of toxicity could be determined, a voluntary recall was instituted by the herb industry in conjunction with the FDA alert.

The positive aspect of the situation is that it represents a breakthrough in FDA and herb industry cooperation in dealing with a toxicity problem. But for the time being, chaparral is history.

As we learn more about the risks and benefits of herbs, undoubtedly other cases similar to the above will occur in the future. While some erroneously believe that there is some sort of conspiracy to create toxicity reports to eliminate the use of some herbs, this is not the case. As new information becomes available both on the usefulness of herbs, as well as their potential toxicity, appropriate action will from time to time be necessary.

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## RIRDC GRANT FOR PACKAGING RESEARCH

A lecturer in packaging engineering at Victoria University of Technology has received a $17,3000 grant to investigate the packaging needs of Australia's primary producers.

The objectives of the research project, entitled Research and Development Needs in Packaging of Australian Produce, is to review packaging research being undertaken in Australia as well as elsewhere and develop a priority list of goals, strategies and potential collaborative programmes, so that an effective research and development programme in packaging can be undertaken and funded.

## FLUORIDE MAKES BONES WORSE

New Zealand dentist Dr. J.Colquhoun (University of Auckland) has proof that fluoridated water, instead of preventing osteoporosis, actually is a factor in an increase in the problem. He predicts a worsening in the epidemic when children raised on infant formula and over-fluoridated water during childhood, reach old age.

A recent study in Utah - USA revealed a high rate of hip fractures among residents drinking fluoridated water at 1 ppm compared with those in unfluoridated areas.

## POSSIBLE AIDS CURE TREE CUT DOWN

Starting with twigs from a Malaysian gum tree, researchers in 1991 isolated a compound that blocked the spread of the AIDS virus in human immune cells.

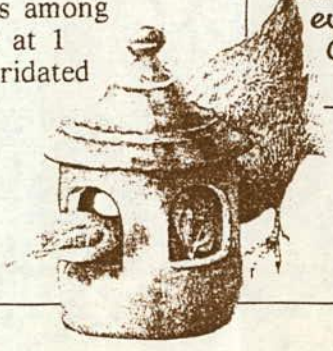
The team sent biologists racing back to Malaysia for more samples from the tree, but when they got to the swamp, the tree was gone. And no tree found since has produced the same compound.

The tree that showed promise was a member of the guttiferae family of gum producing trees. The particular type, known as Calophyllum lanigerum, was found in a swamp in the Malaysian island province of Sarawak. Researchers collected about 1 kg of twigs, bark and fruit from the tree, enough to conduct a few experiments. The scientists collected the sample as part of a broader effort to find medicinal substances in tropical trees.

Back at the National Cancer Institute's research centre in Maryland, scientists reduced sap-like material, found in the tree, down to a new compound, calanolide A. They tested it against the HIV-1 virus and found the new compound was '100% effective' in blocking the process. They said it completely inhibits the virus's pathological effects on human immune system cells, without causing damage to the human cells.

*(Northern Star, 15-5-93)*





# INDUSTRY NEWS

## ECHINACEA – Australian purpurea or American angustifolia?

Managing director of Greenridge Botanicals, Ray Vandersee, founded the Greenridge RELIEF range of products containing Ech. purp. at a time when other manufacturers were using imported angustifolia. The RELIEF range far exceeded all expectations as far as the therapeutic effects and sales were concerned and now acceptance of purpurea by manufacturers is much higher.

According to Ray Vandersee Ech. purp. is easier to grow than angustifolia and both have their own special properties.

"Basically angustifolia is a better blood purifier while purpurea is the best immune stimulant" he said.

Ray said fresh plant extracts of purpurea that can only be produced from the locally grown herb had been analysed and shown to display active ingredients previously thought to be present in angust. only. Ech. purp. fresh plant extracts also contained therapeutically important polysaccharides which are absent from liquids prepared from dried angust. root.

Polysaccharides are important because their action on the immune system had been shown to effectively hinder the growth and spread of viruses and bacteria throughout the body tissue.

Ray said that German research conducted in 1989 showed that all the commonly traded species performed well with Ech. purp. having the strongest activity of any of the three species in alcoholic fresh plant extract.

Research in 1980 by Harnischfeger and Stolz showed that the influenza and herpes viruses were inhibited by extracts of Ech. purp. while Ech. angust. extracts had no effect.

"Why send your hard–earned dollars over to the USA to purchase angust. from farmers who are subsidized to compete unfairly in our markets, when local farmers can grow purp. which is the better product anyway?

"Purchase of the locally grown product naturally means your money stays right here in Australia and helps stimulate our economy."

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## UNI IN $10M DRUG RESEARCH DEAL

Research into new drugs, based on native flora and fauna, will be the focus of a $10m joint venture by Griffith University and an international pharmaceutical company announced yesterday.

Astra Pharmaceuticals, a subsidiary of AB Astra of Sweden, has signed an agreement with the university's Queensland Pharmaceutical Research Institute to invest more than $10m over five years.

The project involves scientists examining the molecular structure of naturally occurring compounds to see whether these structures can be duplicated in the manufacture of commercial drugs.

Institute director Assoc. Prof. Ron Quinn, who is leading the research team, said the joint venture with Astra was part of a move by the pharmaceutical industry away from synthetic drugs to natural products. He said Queensland's rainforests and marine environments contained some of the world's richest biological resources. "We have at our fingertips an extraordinary range of species with potential to produce novel compounds of immense therapeutic and commercial value."

*(Australian 11–6–93)*

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*AND OTHER NEWS.....*

## 450 TREE SPECIES IN BRAZIL JUNGLE PLOT

Researchers have provided a striking demonstration of the biological wealth of tropical forests by cataloguing 450 species of trees in a 1 ha. patch of forest on Brazil's Atlantic coast.

Among the 450 species were 13 unknown to science, said Wayt Thomas of the New York Botanical Garden, who directed the study. "We know very little about ecosystems this rich," he said. A similar sized patch of forest in North America would yield about 10 species of trees, he said.

The survey included 270 trees more than 10 cm in diameter. The world record in a similar plot is 300 10 cm trees, in the Peruvian Andes.

*(Northern Star, 2–4–93)*

# NEXT OHGA MEETING

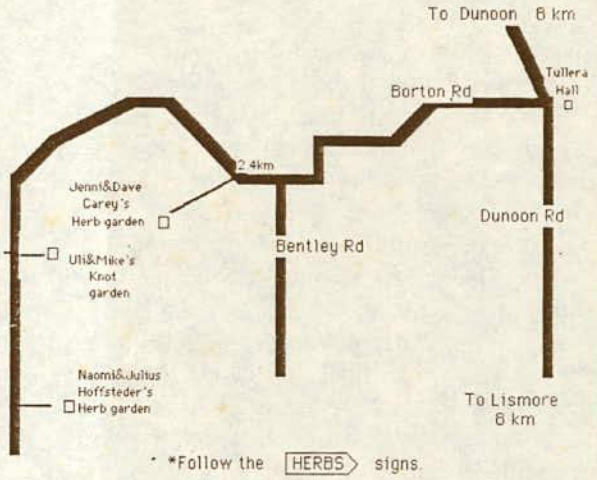
## SUNDAY AUGUST 1

at Jenni and Dave Carey's
Borton Road, Tullera
ph. 066-282031

The meeting usually starts at 11 am; as usual, everyone is welcome from 10 am onwards. Dave and Jenni have quite a few neighbours with herb gardens, who have all kindly given their permission for us to have a look and walk-around if we want.

Should be a good day. Dont't forget: if you have anything organic or herbal to sell, this is your chance.

See you there!




**STOP PRESS: I'VE JUST HEARD THAT THE TULLERA LANDCARE GROUP WILL PROVIDE US WITH COFFEE, TEA AND LUNCH AS A FUND RAISING EVENT FOR THEIR GROUP.**

ENVIRONMENT: DDT DOC

### EPA PROPOSES NEW "SAFE" DDT LEVELS

The Environment Protection (?) Agency proposes to raise the safety levels for DDT in the soil. At the moment dip sites with DDT contamination of 1 parts per million or more are considered unsafe for humans.

The EPA wants to relax the standard to 50 ppm, saying this is a more realistic standard.

The North Coast Environment Council fears that these new proposed safety levels will allow the NSW Government to avoid taking legal responsibility for cleaning up old dip sites. Spokesperson for the NCEC, Ms. Mariann Grinter, says that residents who, through no fault of their own, find them-selves forced to live on contaminated land, have the right to have that land cleaned up by the polluter or to be compensated for the significant drop in their property's value. She says that the NCEC had unpublished data showing that root vegetables grown in soil with half the proposed DDT level had been shown to accumulate unacceptably high residue, which made them unfit for human consumption.

*(Northern Star, 21-5-93)*

Typed DDT.

### TRIBUTE FRUIT, LOVINGLY GROWN

The local orchardist in a New Mexico town in the US, has invented a new funeral rite. Because of the balmy climate, many retirees are lured to the area, but in the cold winternights a large number of elderly people die.

The orchardist has set himself up in the same building as the largest undertaker in town. He or one of consultants meet the relatives of each customer of the funeral parlour and find out what fruit the departed liked. Then he arranges for a tree, bearing this fruit, to be planted as part of the funeral service.

The interment is normal, except that after the casket has been lowered into the grave, a group of assistants with silver shovels replace the soil in the grave over the departed to just a few inches below the surface. A selected relative then plants the tree to bear the fruit which was precious to the departed .

A maintenance contract is entered into and when the tree bears fruit, this is marketed under the label: 'Tribute Fruit, Lovingly Grown'. Now there are orchards on land, which was previously designated to be used only for cemeteries.

# CLASSIFIEDS

FOR SALE: ORGANIC TEA TREE MULCH
$5 $m^2$. Alan Conroy, ph. 066-477129

ORGANIC NON-HYBRID HERB SEEDS for sale. All culinaries, but also bergamot, pyrethrum, feverfew, echinacea, etc. etc. Call Elle on 066 291057 or send SAE for seedlist.

FOR SALE: Standards for Organic Certification.
$5,00 incl. postage.
Write to:
Certification Officer,
O.H.G.A., P.O.Box 6171,
South Lismore 2480.

WANTED: mulch materials and manures from organic certified properties. Call any committee member (see backpage).

OFFERED: Work experience in exchange for lunch and cuttings.
Call Elle or Howard on 291057.

FOR SALE: 650 mtrs heavy duty, high flow drip tape. 20¢/metre.
Eric Sandberg ph. 066-282037

FOR SALE: 1 acre plus herb farm
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