Agroforestry Update

Forest
Research
CSIRO

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Agroforestry Update - an occasional newsletter for agroforestry researchers, extension specialists and practitioners.

No. 2 Jan 1984

Compilers D.A. Brett
C.J. Borough

Typist K. Munro

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COMPILERS COMMENTS

Well here we are a year later with the second issue. The Directory at the back includes another 20 names - so we continue to grow. Where individuals have 'updated' their personal profiles, the old have been amended, but otherwise it hasn't changed.

As before, most of the work for this issue was done by Karin Munro who deserves credit not only for typing the copy but for skillfully deciphering the apalling handwriting of some of the contributors!! Thanks are also due to the staff at Black Mountain who printed and collated this issue, and of course, thanks to the contributors.

Though our own time contribution in the production of the Update has been small, it still didn't fall together on its own. This is a pity as the future of the Update is now up in the air. By the time this reaches you David Brett's term appointment with CSIRO will have expired, he will have left the Division, and Chris Borough's new commitments at work will prevent him from helping compile a third issue.

So, is there anybody out there willing to take on the production and distribution of Update No 3? So the thought isn't too daunting, perhaps the approach ought to be: 'one Update at a time'. We'll pass on the mailing lists and front cover artwork to whoever volunteers. Don't by shy!!

The green form is still there. Please continue to send it back. Chris will then forward it to whoever compiles the next issue. Have a good New Year.

David and Chris

BIBLIOGRAPHY OF AGROFORESTRY PROJECTS

The Grassland and Pasture Crops Group of the F.A.O. is currently preparing a bibliography of agroforestry projects. Dirk Pottier, a pasture agronomist with F.A.O. in Western Samoa is co-ordinating the information about projects in the South Pacific.

Dirk recently reported on a pilot 'Cattle-under-trees' scheme in Western Samoa. He writes that though the scheme had a short life and was not a success story, it was considered a very valuable exercise.

In brief 1-year-old Brahfords were grazed under a 4-yr-old mahogany plantation. Pasture species were predominantly ti grass (Paspalum conjugatum) and mile-a-minute (Mikania micrantha). After almost a year of uncomplicated grazing, the cattle started to strip the mahogany bark. Over 80% of trees were completely ring-barked or stripped. The following four hypotheses, attempting to make a contribution towards an acceptable explanation, were examined.

1. Eating bark began as a response to feed storage and continued because of habit.

2. There was a mineral deficiency in the pasture that the cattle attempted to overcome by eating bark.

3. That the trees produce and ooze a sweet gum that makes the bark more palatable, and

4. The cattle experienced a vitamin deficiency that drove them to eat bark.

For a number of reasons, Dirk's most favoured hypothesis was 1. i.e. a feed shortage caused through management imprudence.

The results of this pilot scheme were a useful reminder to us all that seldom do we get anything for nothing. If we are aiming to increase the total productivity of a site through agroforestry practices, one of the major additional inputs necessary is more management.

C.A.B. AGROFORESTRY BIBLIOGRAPHY

A useful bibliography compiled by Paul Richards of the Commonwealth Forestry Bureau is now available. Copies may be obtained from:

Central Sales Branch,
Commonwealth Agricultural Bureau,
Farnham Royal,
SLOUGH SL2 3BN
U.K.

171 references were obtained by searching the CAB database from Jan 1973 to Feb 1982. Selection was restricted to vertically integrated forestry and agricultural systems where all components are actively managed. Considered to be outside the scope of the bibliography were: 1. papers specifically on systems where the trees are producing food/fodder; 2. systems that might broadly be termed social forestry (e.g. communal forests, village woodlots) and 3. systems integrated horizontally within a farm or other land holding (e.g. farm woodlots). A final selection rule was that at least one component of the system must be a forest tree grown primarily for its wood.

Paul Richards suggests that the bibliography is a manageable collection that would be a useful guide to background reading, especially for someone new to the subject. We agree with this.

UPDATE ABSTRACTS

ANDERSON, G.W. AND BATINI, F.E. (1983)

Pasture sheep and timber production from agro-forestry systems with sub terranean clover sown under 15-year-old Pinus radiata by a method simulating aerial seeding. Aust. J. Exp. Agric. Anim. Husb. 23, 123-130.

Summary—A fifteen-year-old plantation of *P. radiata* at Mundaring, Western Australia, was thinned to densities ranging from 0 to 200 trees/ha, and pruned to 6 m. Subterranean clover cv. Seaton Park was sown with fertilizer by a method simulating aerial seeding. Pasture, sheep and tree growth and changes in soil and foliar nutrient levels were measured over a four year period.

Clover establishment was most satisfactory. In the second year the pastures under tree densities of 150 or more trees/ha carried 60% of the numbers of sheep carried on the pastures with no trees. Two years later, following increased canopy growth and shading, this relative carrying capacity was down to 40%. After four years, soil and foliar nutrient levels were not affected by tree density. At the lowest density of trees (< 100 stems/ha), individual tree diameter growth and volume production per hectare were stimulated and there was least loss of agricultural productivity. This density was therefore preferable for agroforestry.

MARGETTS, S.W. (1983)

Agroforestry, shelterbelts and fodder-tree developments in New Zealand.

Vic. Department of Agriculture
Study Tour Report No 89. June 1983.

ABSTRACT

It is asserted that widespread interest in the revegetation of Victorian farmlands could be turned to more effect by the use of producing tree species, rather than the sole dependence on native trees and shrubs. A study-tour of New Zealand agroforestry, shelter-belt management and fodder-tree plantings provided confidence in the marked biological benefits resulting from these practices. Although much economic study and integration with practical farm management remains to be done, indications are that these practices should financially benefit both New Zealand and Victorian farming, while contributing to long-term salinity and erosion amoelioration.

HACKETT, C. AND CAROLANE, J. (eds) (1982)

Edible horticultural crops: A compendum of information on fruit, vegetable, spice and nut species.

Academic Press of Aust.

A revolutionary 4-part compendium that provides standardized information about approximately 150 edible horticultural crops. The main purposes of this compendium are to codify knowledge and to provide a rapid means of identifying crops which may suit a particular locality or purpose.

Nearly 80 crop attributes are covered (e.g. drought tolerance, frost tolerance, skills needed for production). These are dealt with in 6 groups: names; properties; ecology; agronomy; marketing and storage; and a miscellaneous group which lists experts, research centres, etc. For simplicity, the data generally appear as ratings and code-numbers, the meanings of which are clearly explained. The data refer to the species level, but an indication of the range of characteristics observed amongst cultivars in domestic or commercial use is also given.

BARR, N. (1983)

Significance of courageous thinning and pruning on rural and environmental forestry.

Institute of Foresters of Australia 10th Triennial Conference 29 August - 2 Sept. 1983.

SUMMARY This paper describes the research and early practice which lead up to the present swing over to wider spacings in pruned forests in New Zealand. Mention is made of the work being done at Tarago, New South Wales and of the preliminary report on pruning and thinning by the Radiata Pine Task Force and its close relationship to the silviculture practised by some New Zealand farm foresters. A typical regime of thinning and pruning is described. The importance of tree breeding and the work of tree breeders are discussed. The point is made that this open but efficient forestry can be park-like, environmentally sound and pleasant to view. Such forests can be grazed until utilisation, making it possible for families to gain a good income therefrom. It is stressed that this work should be seriously regarded. Forest writers should write well about such regimes which will please people outside the industry.

MARRIANE, N.J., MATHEWS, L.R., KILGOW, R., AND HAWKE, M. (1982)

Prevention of bark chewing of pine trees by cattle:- the effectiveness of repellants.

N.Z. Society of Animal Production, 42, 61-63.

Reducing 'idling' tone of cattle, redirecting responses away from bark chewing, or applying a 'repellant' substance could be potential management tools for controlling damage to pine trees. Egg-powder, copper carbonate, thiram, cattle dung and scatole were compared as repellants. The dung treatment was the most effective in preventing bark chewing. Egg-treated trees were licked and not chewed.

As a readily available material, cattle dung has a potential use in the control of bark chewing.

Proceedings of the N.Z. Society of Animal Production, 1982 Vol 42:61-63.

RECENT EXTENSION LEAFLETS

AGROFORESTRY AND FARM WOODLOTS
- DEPT. OF AGRICULTURE, S.A., FACT SHEET 25/28

Copies from: Peter Carr, Principal Extension Officer, Dept. of Ag. S.A., South East Regional Headquarters, Box 618, Naracoorte, S.A. 6271

AGROFORESTRY, THE INTEGRATION OF TREES AND FARMING - W.A. Forests Dept.

Copies from: Richard Moore, C/- Forests Dept. (Research Section), Queens Street, Busselton, W.A. 6280

FOREST FARMING RESEARCH AT TIKITERE - N.Z. Min. of Agriculture and Fisheries and Forest Research Institute.

Copies from: M.F. Hawke, Forest Research Institute, Private Bag, ROTORUA N.Z.

MILES MERWIN TO VISIT NZ AND AUS.

Miles is the Director of the International Tree Crops Institute in USA and is planning to visit our two countries for 12 months commencing June 1984. In Australia he plans to spend 6 months in Canberra testing the genetic variation in Casuarina cunninghamiana plus look at cold hardy provenances of a range of eucalypts. He is interested in the developments of low cost clonal preparation of both conifers and eucalypts.

Miles can be contacted
C/- ITCI
PO Box 666
Winters, Ca 95694 U.S.A.

AGROFORESTRY FIELD DAY - CLARENCETOWN

A field weekend 11/12 February at the properties of Mr Keith Lober and Dr Peter O'Brien will look at agroforestry in practice. Keith is well known for his innovative work with poplars. Peter is raising deer in conjunction with native forests and poplar plantations. Geoff Wilson who is producing a film on agroforestry in Australia will be filming the event.

C.B.

Enquiries to:

MANAGER
COTTONWOOD FARMS
DONALD GRIEVES
PO BOX 14
CLARENCE TOWN
N.S.W. 2321

PH: 049 964 194

AUSTRALIAN TREE SCIENCE INSTITUTE?

The following proposal for an Institute for Tree Science was sent to us by Colin McQueen, NSW. (For Colin's interests see Directory). We reproduce Colin's proposal in full. If you'd like to make comments, Colin would welcome them direct to him - address is Coffee Camp, NSW 2480.

Deforestation, soil erosion, salinisation of farmlands, loss of soil fertility, acid rain and a build-up of atmospheric CO 2 are rapidly increasing problems on our planet.

There is a greater awareness that these problems are intimately linked with a general decline in tree numbers, and more and more media attention is being focussed on these topics.

Despite this, there are countless scientists studying things like crops, pastures and animal nutrition down to the last enzyme, kilogram of dry matter and ounce of weight gain, but no more than a handful of researchers addressing many of the vital environmental problems of today. There are huge gaps between the traditional disciplines of agricultural science, forestry, botany and horticulture in knowledge of trees and their uses.

An Institute for Tree Science could be developed in Australia to encompass some of these gaps and provide a focus of expertise in tree matters.

The functions of the Institute could be five-fold:

* Training of students
* Research
* Information resource centre
* Development of demonstration tree-planting projects and arboreta for the protection from extinction of rare and useful plant species and varieties
* Extension through articles, scientific papers, field activities, books and consultancy services.

Topics which could be covered in training and research programs include:

* Tree propagation and growth
* Agroforestry
* Stock and human food systems using trees (e.g. acacias, other legumes, mulberry, carob, chestnut)
* 'Drought-proofing' of farms with fodder trees
* Tree plantings for fire protection in rural and semi-rural areas
* Establishment and management of specialised timber plantations (e.g. rainforest cabinet timbers) and woodlots for public and private landowners
* Trees for control of soil erosion, salinity and weeds
* Tree planting to improve soil structure and fertility
* Small-scale harvesting and processing methods and marketing of tree products

* Windbreak design

* Enrichment planting for wildlife, bees, etc

* Tree association for mutual benefit (companion planting)

* Commercial development of Australian flora for food, drugs, essential oils, natural pesticides, etc

* The role of belts or areas of tree and shrub species in integrated pest management programs (provide habitat for predators of agricultural pests)

In Australia, as in the rest of the world, all these valuable uses for trees are inadequately researched and developed. The formation of such an Institute with appropriate support could provide immense long-term benefits for agriculture and the environment.

Work with trees is a low-capital, labor-intensive operation. Over 200 jobs in forestry and related industries can be created for the same amount of money it would take to create a single job in some capital-intensive industries.

High-technology industries are an integral and vital part of today's world, but if the out-of-work millions are to be gainfully employed, support is needed for employment programs. Work with trees, with its long-term social and environmental benefits is an ideal avenue for satisfying and socially beneficial employment.

There is a great need for a science-based focus for the development of tree knowledge in Australia. This would aid the long-term social and environmental advancement of this country.

AGROFORESTRY RESEARCH IN VICTORIA

Jim McLaughlin, Department of Agriculture reports that it appears almost certain that there will be money for the development of 4-5 sites for agroforestry research from the Victoria's 150th Anniversary programme. The planning and development of two sites is well advanced with operational groups from Ag. Vic. and FCV at the helm.

AGROFORESTRY IN GIPPSLAND, VICTORIA

At Flynn Creek Upper, some 18 km from Traralgon, Crawfords' farm of around 250 ha abuts extensive plantations owned by APM Forests Pty Ltd. Some 15 years ago the family (Ken, Colin and Graham) started to plant pines so that now they have towards 40 ha established. The early plantations were traditional ones; some have had one thinning (by contractor) and are nearing their second, which the family will do this time.

Three years ago the first agroforest was planted (at a spacing of 7 x 3m) and a second went in in 1982. The land selected is a steep slope, mainly of very fertile red and black soil, and the current area totals 12 ha. After planting the three-year-old stand was cropped for grains, and later sown to grass in Spring 1983. It is being grazed by cattle currently (January 1984) with no apparent damage. (The Crawfords have also had calves grazing voluntarily in a one-year-old traditional stand (the gate is left open) and again there has been no damage of which to speak). The younger agroforest, which is 18 months old, is being cropped for potatoes - these are reportedly 'digging well'. This stand will be grazed in 1985.

The Crawfords have done some experimental pruning and removed obviously undesirable branches from certain young stands. They recognize the importance of pruning to the success of agroforestry and are gearing up to do this as part of their general farm operations. Weed control has proved essential in the agroforest; last year Velpar was used to control heavy infestations of wattle and blackberry. Initially they fertilized the agroforest generously but found the application only effective on the poorest parts of the site. They have also sold Christmas trees, 4-500 last year and 300 this year.

Ray Bickerton, a Boolarra dairyfarmer, is another agroforester. His plantation of radiata pine once belonged to Robin Cromer of CSIRO, but, when Robin moved to Canberra, Ray bought it - Ray had worked with Robin from the beginning in 1978 when 9000 trees were planted.

The land is undulating red ('basaltic') soil and now carries 12.5 ha of open-grown pines. Hay and silage were cut the first three years, and cattle and calves were let in after two years, but under surveillance.

Two lifts of pruning have been carried out, with the clean boles now at 3-4. Ray finds it easy to fit in - if he has a couple of spare hours he rides over on his motorbike, works, and returns the kilometre to his farmyard as necessary.

Cattle eat the needles from pruned branches. A neighbour might soon but a mulcher that Ray will be able to use - at present he has to pick branches up and he can't cut hay. Pruning seems to be necessary every 12 months.

The stand has had no weed problems apart from the curse of the Strezeleckis, ragwort. The land is fertilized along with the rest of the farm.

A third agroforester is Mr David Ogilvy, a Traralgon surgeon, who owns a 78 ha grazing property on Callignee red soil, although part of the farm is very steep.

In 1977 and 1978 Chris Borough put in an agroforestry trial of mountain ash covering 2-3 ha with variable spacing. Grass growth has been good, especially under the more open stands. The trees are over 13 m high, with good form; they have not suffered wind damage. David puts cattle into this stand whenever he needs to and wants to expand his agroforest.

David also has 10 ha of conventional plantation of both radiata pine and eucalypts - the youngest date from 1982. He runs his cattle in these stands.

In addition he planted a swampy area with belts of blue gum and yellow box in 1979, which are now well above the blackberries (even though yellow box might be expected not to flourish there). Ultimately cattle will be turned onto this paddock and, when the blackberries are trampled, some pasture preparation and agroforestry may be possible. David has found blue gums to be liable to wind damage.

Finally APM Forests and the Forests Commission have a small demonstration forest at Lardner on the site of the Gippsland Field Days. This red-soil site includes a traditional pine plantation, a weedicide trial, groves of blackwood and eucalypts, and agroforests of radiata pine and mountain ash. These stands suffer from the fact that the exigencies of professional life prevent us from seeing them frequently enough. Nevertheless they were pruned a year ago, belatedly, and the mountain ash looks excellent. The pines generally suffer from butt sweep, which might have been minimised if changes had been made in the direction of the riplines at planting.

Because the Lardner site is, overall, a showplace, and also close to McMillan Rural Studies Centre, we are very conscious that our mistakes are public.

R. Youl
Acting Chief Forest Extension Officer

SHELTERBELTS NEEDED IN NSW WHEAT ZONE - Kim Wells (CSIRO Div. of Water and Land Resources)

In company with some ecologists I travelled 1000 km through the NSW wheat zone just after widespread heavy rains at the end of February. It was shocking to see the drought-stricken landscape but worse to see how plant nutrients in the form of chaff-like organic matter and sheep shit had been stripped off even near-flat land to pile up against fluces or to finish up clogging dams. Strips of woody vegetation planted or retained in upper catchments could provide some control of this awful erosion or, where the catchment is just too vast and valuable for cropping for this to be practical, ungrazed filter strips of shrubs and trees established where the water concentrates might at least prevent fences being washed down and railways undermined in the way we saw. These strips would have value for shelter and habitat too.

THINGS ARE ON THE MOVE IN AFC AND AAC

At the November 1983 meeting of Standing Committee of the Australian Forestry Council it was pointed out that CSIRO had agreed to co-ordinate a meeting* of representatives from each State but that States would need to nominate their representatives. Some States have done so and a gentle prod from within Departments might make others follow suit. I will leave it a little while before writing and asking formally.

* meeting date proposed 6-7 June 1984

Chris Borough

AGROFORESTRY - OPPORTUNITY OR FAD

On November 4th the Australian Institute of Ag. Science and the Institute of Foresters of Australia sponsored a seminar on agroforestry at Melbourne University. Speakers included -

- Leith Knowles (NZ Forest Research Inst.) who came specially from NZ and gave a superb presentation fitting NZ into the world scene

- Ian Ferguson (Prof. Forest Science, Melb. Univ). looked at the demand for wood and put the wood production side of agroforestry to perspective

- A range of other speakers Kevin Ritchie, Francis Clarke, Geoff Wilson, Bill Fisher, Peter Greig and myself who presented talks on various aspects of agroforestry.

The papers from the meeting are to be published and will be available

Dr J. McLaughlin
The Aust. Inst. Ag. Sci.
Suite 302
Clunies Ross House
191 Royal Parade, Parkville 3052

SOUTH AFRICAN STUDY TOUR

Geoff Wilson reports that -

The Australian Forest Development Institute's South African study tour planned for October, 1983 has been deferred until April-May, 1984.

Geoff writes that the new date will fit in with the Symposium on Site and Productivity of Fast Growing Plantations.

The cost is expected to be about A$3,800 for three weeks. Further details from Geoff Wilson C/- PO Box 181, Caulfield South, Victoria, 3162.

ANU computer project

MULBUD aids forestry in Third World

A computer software package developed at ANU to analyse the economic potential of agroforestry projects has received additional funding following successful field trials in Kenya last year.

An improved version of the package is to go into use with research institutes in a number of developing countries.

The system, called MULBUD (for multi-crop, multi-period budgeting), provides a simple, straightforward tool for researchers and planners in developing countries who have no previous experience of computers and minimal knowledge of economics. It is, in computer terms, 'user-friendly', 'fail-safe', and 'obvious'.

It forms the basis of a joint project between ANU's Development Studies Centre and the International Council for Research in Agroforestry (ICRAF), based in Nairobi.

ICRAF scientist Mr Dirk Hoekstra was recently at ANU to collect the improved version of MULBUD. He and other ICRAF scientists will be taking the package to research institutes in developing countries where demonstrations and in-house training will be given to scientists working in agroforestry and related areas.

Development of the package by Dr Dan Etherington and Mr Peter Matthews has been assisted by two grants totalling US$120,000 from the International Development and Research Centre of Canada.

Dr Etherington is a Fellow in the Development Studies Centre, Research School of Pacific Studies, and Mr Matthews, who left the project last July, was formerly departmental computer programmer, Department of Economics, Research School of Pacific Studies. He is now with the World Bank in Washington.

The modifications to MULBUD include:

- Providing for multiple outputs in crop data. This allows the multiple output of various crops and trees to be taken into account. For example, certain trees can produce leaves (for fodder), fruit and firewood. The earlier version of MULBUD could only cope with single crop output.
- Allowance for multiple loans with variable loan repayment schedules to be taken into consideration.
- Enabling local units, such as currency and land, to be converted into international units at the touch of a key.
- Increasing the number of time units for which calculations can be conducted, from 48 to 60.
- Incorporating additional and more comprehensive 'help' messages into the system.

Agroforestry is a farming system which integrates different tree species with crops and/or livestock to get higher productivity, more economic returns and better social benefits than are obtained under monoculture on the same area of land.

The MULBUD system was designed specifically to assist with the analysis of agroforestry projects because they are more complex and long-term than most other land-use systems.

The package has been tested on agricultural systems from a wide range of countries, including Papua New Guinea, Tonga, Thailand, Sri Lanka, Costa Rica and New Zealand.

'Because we are dealing with long-lived systems which have been little studied, a lot of analysis has to be done on the basis of fragmentary evidence and best guesses,' Dr Etherington said.

'Agroforestry scientists are working in an area where firm facts are hard to come by, but if they wait long enough to discover them, the farmers they are trying to help will have died of old age.'

He said MULBUD was a mechanism which forced researchers to put down their assumptions about likely outcomes very explicitly. It then undertook a very rapid analysis of those assumptions, including extensive sensitivity testing.

'One of the main aims of the project was to ensure that the package could be used at widely-dispersed institutes and research centres that may or may not have permanent or reliable supplies of electricity.

'For a researcher in the field, MULBUD is phenomenally fast. It can save him months of work, as he can do a series of iterative calculations very rapidly.'

Ten years ago, researchers would have needed a main-frame computer such as an IBM 360 or UNIVAC to run the MULBUD system. Now an institute can buy a microcomputer capable of running the system for as little as $2,000.

DIRECTORY

AUSTRALIAN CAPITAL TERRITORY

NAME

Chris Borough PH:062 818308

ORGANIZATION

CSIRO Division of Forest Research
PO Box 4008
CANBERRA, A.C.T. 2600

AREA OF INTEREST

Research in the integration of commercial tree species with grazing in med/high rainfall zone.

CURRENT PROJECTS

- Evaluation of range of strategies for management of pine/sheep combination.

- Development of clones of radiata pine studied to wide spacing.

- Development of pruning systems for trees at wide spacing.

NAME

Dan M. Etherington PH: 49 4699

ORGANIZATION

Development Studies Centre
The Australian National University
PO Box 4
CANBERRA A.C.T. 2600

AREA OF INTEREST

Economics of tree crops

CURRENT PROJECTS

The economic assessment of agroforestry landuse systems in the tropics. See article 'Agroforestry gets computer touch', this issue Agroforestry Update.

NAME

Kim Wells PH: 465241

ORGANIZATION

CSIRO Division of Water & Land Resources
PO Box 1666
CANBERRA CITY A.C.T. 2601

AREA OF INTEREST

Replacing trees in the rural landscape.

Wood as fuel.

CURRENT PROJECTS

Mapping forest and woodland modification since settlement.

NEW SOUTH WALES

NAME

Dr George Alexander PH: 02 631 8022

ORGANIZATION

CSIRO
Division of Animal Production
PO Box 239
BLACKTOWN N.S.W.

AREA OF INTEREST

Survival of young animals especially sheep and cattle.

CURRENT PROJECTS

Sheltering behaviour of livestock.

Maternal/offspring behaviour.

NAME

Neil Jones PH: 063 624699

ORGANIZATION

Orange Agricultural College
PO Box 883
ORANGE N.S.W.

AREA OF INTEREST

Senior Lecturer in Plant Production including presentation of a 30 hr unit in Farm Forestry to Farm Management students at O.A.C.

CURRENT PROJECTS

At present, considering a proposal for the establishment of an agroforestry demonstration (e.g. 10 ha) on the College farm.

NAME

Colin McQueen PH: 066 899289

ORGANIZATION

Secretary
Richmond Valley Reforestation Association C/-
Colin McQueen, Coffee Camp N.S.W. 2480

Coordinator
Richmond Valley Permaculture
C/- Colin McQueen Coffee Camp N.S.W. 2480

AREA OF INTEREST

Promotion of reforestation of marginal lands
Public promotion of tree consciousness
Multiple purpose agroforestry (permaculture)
Rainforest regeneration (especially cabinet timbers).

CURRENT PROJECTS

Regular newspaper articles on various tree matters.
Rainforest regeneration and permaculture development on own land.

NAME

Turner, R.J. PH: (02) 2341567

ORGANIZATION

Forestry Commission of NSW
Box 2667 GPO
SYDNEY N.S.W. 2001

AREA OF INTEREST

Private forestry - urban forestry agroforestry etc.

CURRENT PROJECTS

Extension Forester advising on above and coordinating extension activities throughout the state.

QUEENSLAND

David Cameron PH: 2891635 or 3770209

ORGANIZATION

CSIRO Division of Forest Research
Cunningham Laboratory
306 Carmody Road
ST. LUCIA QLD. 4067

AREA OF INTEREST

1. Nutrition of tropical and sub-tropical tree species.
2. Tree productivity in pastures.

CURRENT PROJECTS

1. Analysis and interpretation of results of tree nutrition studies in the Northern Territory and the preparation of publications on the subject.
2. Examination of the interactions between trees and pasture.

NAME

David Charles-Edwards PH: (07) 3770291

ORGANIZATION

CSIRO
Division of Trop. Crops and Pastures
Cunningham Laboratory
ST. LUCIA, QLD. 4067

AREA OF INTEREST

Mathmatical modelling

CURRENT PROJECTS

Project STAG (with Division of Forest Research, Soils Tropical Crops and Pastures, Maths and Stats).

NAME

D. Doley PH: 07 371 2769

ORGANIZATION

Botany Department
University of Queensland
ST. LUCIA QLD. 4067

AREA OF INTEREST

Environmental physiology of trees

CURRENT PROJECTS

- Field and laboratory studies of dry matter production by eucalypts in relation to water consumption.
- Experimental studies of effects of atmospheric pollutants on tree growth.

NAME

Peter Francis PH: 071 822244

ORGANIZATION

Department of Forestry
Gympie Research Centre
Department of Forestry
M.S. 483,
GYMPIE QUEENSLAND 4570

AREA OF INTEREST

Establishing Pine Plantations on improved pastures.

CURRENT PROJECTS

- experimental evaluation of suitable strategies for the successful establishment of pine plantations in improved pastures. Treatments include grazing, herbicides, cultivation, fertilizer.

NAME

Russell Garthe PH: (071) 822244

ORGANIZATION

Qld Department of Forestry
M/S 483
GYMPIE QLD. 4570

AREA OF INTEREST

Eucalyptus in Farm Woodlots, S.E. Qld.

CURRENT PROJECTS

(1) Survey of potential pole stand sites Pomona region.

(2) Co-operative site preparation trials for E. cloeziana Pomona region (to be established 1982/83).

NAME

Ross Gutteridge PH: (07) 377 3824

ORGANIZATION

Department of Agriculture
University of Queensland
ST LUCIA QLD. 4067

AREA OF INTEREST

Livestock production on pastures under trees.

CURRENT PROJECTS

Productivity of cattle grazing Paspalum conjugatum/legume pastures under Eucalyptus deglupta at three stem densities in the Solomon Islands.

NAME

R.A. Hynes PH: (07) 223 2398

ORGANIZATION

Dept. Biology & Environmental Science
Queensland Institute of Technology
GPO Box 2434
BRISBANE QLD. 4001

AREA OF INTEREST

Ecophysiology and Productivity of Eucalyptus grandis in Agro-forestry projects in S.E. Qld.

CURRENT PROJECTS

Member of the STAG (Soil, Tree and Grass Investigations) Group co-ordinated by David Cameron CSIRO Forest Research at SAMFORD CSIRO Station SE, Qld - jointly responsible for tree eco-physiology sections of the program.

NAME

Peter Johnston PH: 07 371-3511 Ext. 398

ORGANIZATION

Development Planning Branch
Queensland Dept. Primary Industries
Meiers Road
INDOOROOPILLY QLD. 4068

AREA OF INTEREST

Use of trees on degraded agricultural sites and in conjunction with agricultural activities. Use of trees in reversing salinity problems.

CURRENT PROJECTS

- Examination of increasing salinity levels and tree density in Mary Valley.
- Promotion of Agroforestry in south east Queensland.
- Role of Land Management in dieback of Queensland tree species.

NAME

Dick Jones PH: (07) 3770351

ORGANIZATION

CSIRO Division of Tropical Crops and Pastures
306 Carmody Road
ST. LUCIA 4067

AREA OF INTEREST

Pasture growth as affected by trees

CURRENT PROJECTS

Assessing effect of tree spacing and species on pastural yield and composition. The two trees species are E. grandis and Lucaena leucocephala.

NAME

J.K. Leslie PH: 227 6380 (07)

ORGANIZATION

Deputy Director,
Division of Plant Industry
Dept. Primary Industries
GPO Box 46
BRISBANE QLD. 4000

AREA OF INTEREST

Administration of research and extension in plant production and related land use.

CURRENT PROJECTS

NAME

D.I. Nicholson PH: (070) 911 844

ORGANIZATION

Dept. of Forestry
Main Street
ATHERTON QLD. 4883

AREA OF INTEREST

Feasbility of agroforestry projects in North Queensland, and local interest.

CURRENT PROJECTS

Two planned for 1982/83.

NAME

John Compton Tothill PH: (07) 3770 344

ORGANIZATION

CSIRO
Division of Tropical Crops and Pastures
306 Carmody Road
ST LUCIA QLD 4067

AREA OF INTEREST

Ecology of the speargrass lands

CURRENT PROJECTS

Native pasture/tree interactions in woodland
Ecology of Speargrass (Heteropogon contorfus).
Animal production from speargrass lands
Ecology of improvement of native pastures

SOUTH AUSTRALIA

NAME

Peter Carr PH: 087 64 7419

ORGANIZATION

Dept. of Agriculture
South East Regional Headquarters
Box 618, PO
NARACOORTE S.A. 5271

AREA OF INTEREST

On-farm investment in conventional woodlots and agroforestry systems.

CURRENT PROJECTS

Not currently involved, but have a past association with an ongoing project to assess the value of sheep in the control of P. radiata regeneration in multiple thinned stands of conventional spacing, and also in the relative economics of sheep as reducers of the summer fire hazard around conventional P. radiata stands. This work is continuing under the auspices of S.A. Woods and Forests Department.

TASMANIA

NAME

John E. Lake PH: 302345 work 313034 home

ORGANIZATION

Forestry Commission of Tasmania
PO Box 68
BURNIE TAS. 7320

AREA OF INTEREST

All aspects of agroforestry extension work.

CURRENT PROJECTS

AREA OF INTEREST

To Assist Farmers and any other 'Landowner' to understand the value of trees and the associated vegetation to improve farm productivity and the Natural environment.

CURRENT PROJECTS

AETR Conducting State wide competition to find Farms where trees have been used to increase farm productivity and the general area appearance for community benefit. These Farms then to be used to illustrate and educate to other farmers with Seminar program 1983.

ATCV To establish an organisation to link the Landowner and the Volunteers so that non commercial regeneration or planting of vegetation can be carried out. Having now developed local, regional and state experience ATCV is now looking to interstate development.

Farmer Developing Marginal Farming lands to be as productive as possible by using trees and vegetation to increase earnings as a long term development.

VICTORIA

NAME

Dr P.R. Bird PH: 055-721133

ORGANIZATION

Department of Agriculture
Pastural Research Institute
PO Box 180
HAMILTON VIC. 3300

AREA OF INTEREST

Fodder Trees, Shelter belts

CURRENT PROJECTS

Honey locust (Gledistsia triacanthos) - 3 spacings (rows 10 m apart, with tree densities 100, 175, 250/ha) with lucerne between the rows. Aim to evaluate productivity in this environment (700 m rainfall, basalt soils on top of slope).

Replicated experiment. Planting done September 1982.

NAME

Peter Fagg PH: 03 651 1837

ORGANIZATION

Forests Commission Victoria
GPO Box 4018
MELBOURNE VIC. 3001

AREA OF INTEREST

Research into establishment and early tending procedures for conifers on pasture sites.

CURRENT PROJECTS

- Establishment of clones of radiata pine at wide spacings (Otway Ranges).
- Establishment of radiata pine on sites (in the Otway Ranges) where toppling is a problem.

NAME

Timothy B. Cox PH: 054 764217

ORGANIZATION

Australian Farm Tree Generation Committee - Chairman
PO Box 105
SPRINGVALE VIC. 3171

Australian Trust for Conservation Volunteers - Chairman
PO Box 412
BALLARAT VIC. 3350

As a Farmer - Bergamo House, Yandoit Hills VIC. 3461

NAME

Mr W.W. Fisher PH: (03) 651 7558

ORGANIZATION

Economics and Marketing Branch
Department of Agriculture
GPO Box 4041
MELBOURNE VIC. 3001

AREA OF INTEREST

The Economics of Agroforestry

CURRENT PROJECTS

NAME

David Flinn PH 03 65111751

ORGANIZATION

Forests Commission Victoria
GPO Box 4018
MELBOURNE VIC. 3001

AREA OF INTEREST

Research into the integration of radiata pine and pasture production on moderately fertile sites.

CURRENT PROJECTS

Field trial proposed to commence in spring 1982 in co-operation with the Department of Agriculture, Victoria.

NAME

Ken Garland PH: 03 810 1512

ORGANIZATION

Division of Plant Research
Department of Agriculture
PO Box 4041
MELBOURNE VIC. 3001

AREA OF INTEREST

Systems, benefits, research, commercial ventures

CURRENT PROJECTS

Development of report on 'Agroforestry in Victoria' to Dept. Agric. and Forests Commission, VIC.

Co-workers: Mr W. Fisher, Agric. Econ., Dept. Agric.
Mr P. Greig, Forest Econ., For. Com.

NAME

Peter Greig PH: 03-6179626

ORGANIZATION

Forests Commission Victoria
PO Box 4018
MELBOURNE VIC. 3001

AREA OF INTEREST

Economics of agroforestry

CURRENT PROJECTS

1. Economic desk-study of an agro-forestry proposal in Victoria.
2. Measurement of rural tree decline
3. Joint authorship (with J.S. Ferguson) of 'Trees for Profit' - Chapter for revised version of 'Growing Trees on Australian Farms'.

NAME

Michael J. Hall PH: 051-343433

ORGANIZATION

President
Australian Forest Development Institute
C/- APM Forests Pty Ltd
Box 37
MORWELL VIC. 3840

AREA OF INTEREST

Private Forestry in Australia

CURRENT PROJECTS

(1) Demonstration Agroforestry area at Gippsland Field days Farm, Lardner, Victoria. P. radiata E. regnans.

(2) Political lobbying for agroforestry and private forestry, Basic Research, Taxation, Land use Planning, Insurance.

(3) Correspondence Course - McMillan Rural Studies Centre, Warragul Vic. 'Trees on Farms'.

NAME

David Johnson PH: 341 5240 341 5253

ORGANIZATION

University of Melbourne
Faculty of Agriculture and Forestry
Gratan Street
PARKVILLE VIC. 3052

AREA OF INTEREST

Extension, 'agroforestry systems' over the range from commercial interests to people interested in self-sufficiency.

CURRENT PROJECTS

Masters in Forest Science looking at Yield Regulation using linear Programming as a means of achieving this.

NAME

Stuart Margetts, PH: (03) 651 7241

ORGANIZATION

Department of Agriculture, Victoria
Box 4041 GPO
MELBOURNE VIC. 3001

AREA OF INTEREST

Revegetation of landscape, salinity and erosion control, fodder areas, extension of agroforestry.

CURRENT PROJECTS

Victorian Garden State Committee (Member)

NAME

P.J. O'Shaughnessy PH: (03) 8749 211

ORGANIZATION

M.M.B.W.
Watersheds Department
Private Bag 1
MITCHAM VIC. 3132

AREA OF INTEREST

Water consumption of forest stands of varying age and density. Effect of tree growth on wastewater renovation efficiency.

CURRENT PROJECTS

Growth trial of a wide range of indigenous and exotic species irrigated during summer with secondary effluent.

NAME

Geoff Wilson PH: (03) 523 5025

ORGANIZATION

International Tree Crops Institute (Australia)
C/- PO Box 181
CAULFIELD SOUTH VIC. 3162

AREA OF INTEREST

All aspects of agroforestry, but especially tree crops for food and fodder in conjunction with livestock or cropping enterprises, plus fuelwood agroforestry and tropical agroforestry.

CURRENT PROJECTS

. Production of a general text on agroforestry (for the farmer) in Australia and New Zealand)

. Production of an audio-visual on agroforestry (for agricultural colleges and teachers of agricultural science).

. organising two study tours involving agroforestry - one in Africa and one in S.E. Asia.

NAME

Terry White PH: (054) 612 940

ORGANIZATION

1. Salting Action Liaison Team
   (Convenor)
   C/- 37 Goldsmith Street
   MARYBOROUGH VIC. 3465

2. Journal of the National Permaculture Association
   (Editor)
   C/- as above

AREA OF INTEREST

Trees and shrubs for stockfodder, shelter/nutrition and condition
Trees for honey fodder and pollination pools
Trees as habitat for crop predators
Trees for fruit and nut production
Trees as hydraulic pumps/salinity/gound water tables
Salt tolerant species for saline environments
Trees for energy on farms

CURRENT PROJECTS

- With permaculture magazine constantly researching above integrated functions of trees

- With grant of $5000 from Vic. Ministry of Conservation S.A.L.T. is preparing a multi-purpose tree planting strategy plan for the Loddon - Campaspe catchment in Victoria (Consultant - Nannette Oates)

WESTERN AUSTRALIA

NAME

Geoff Anderson PH: 09 3870237

ORGANIZATION

CSIRO
Division of Animal Production
Private Bag
Post Office
WEMBLEY W.A. 6014

AREA OF INTEREST

Agroforestry

CURRENT PROJECTS

Grazing trials with both old (20 year) and young (4 year) pines and annual pastures, near Mundaring, W.A. and some work with eucalypts. Gathering data on production of livestock and timber in integrated systems. Some attention to possible livestock benefits from shelter and pine needle consumption. Pasture growth patterns in relation to distance from single, double and triple rows of trees.

NAME

Frank Batini PH: 09-3676333

ORGANIZATION

Forests Department of W.A.
PO Box 104
COMO W.A. 6152

AREA OF INTEREST

. Agroforestry for fire protection, soil improvement and salinity control.
. Land use patterns, economic and social effects of changes in use.

CURRENT PROJECTS

. formerly involved with establishment of research studies, jointly with CSIRO and PWD (see Anderson, G).

. currently with environmental protection branch, Forests Dept. of W.A.

NAME

Hugh Chevis PH: 097 521 677

ORGANIZATION

Forests Department
Queen Street
Busselton W.A. 6280

AREA OF INTEREST

Pine silviculture research

CURRENT PROJECTS

Establishment and site preparation methods for pine
The use of legumes to provide nitrogen to Pinus species
Silvicultural regimes for growing pine with pasture (spacing, pruning and thinning).

NAME

Trevor Boughton PH: 097 711299

ORGANIZATION

Department of Agriculture
Rose Street
MANJIMUP W.A. 6258

AREA OF INTEREST

Agroforestry systems with edible fruit and nut trees and vines.

CURRENT PROJECTS

Walnut, chestnut, fruit tree research and extension.

NAME

Paul Downes PH: 3870218

ORGANIZATION

CSIRO, Div. Animal Prodn.
Private Bag
PO Wembley
W.A. 6014

AREA OF INTEREST

Forage Shrubs

CURRENT PROJECTS

Species record system
Evaluation of native Aust. Shrubs for forage.

NAME

Commissioner of Soil Conservation PH: 09 3670111

ORGANIZATION

Dept of Agriculture
Jarrah Road
SOUTH PERTH W.A. 6153

AREA OF INTEREST

Various officers interested in hydrology, salinity, wind erosion.

CURRENT PROJECTS

Assessment of Tree plantings on groundwater levels.

Assessment of Trees for stock and soil protection.

Role of Fodder Trees. (Tree Lucerne, Tamarix).

NAME

Ric Engel PH: (098) 811011

ORGANIZATION

Department of Agriculture
Narrogin District Office
W.A. 6312

AREA OF INTEREST

Investigations into salinity as it affects soils in agricultural areas with view to developing systems of minimising and controlling the effects of salinity.

CURRENT PROJECTS

(1) Agroforestry management of saltland using salt tolerant eucalypts.
(2) Lucerne tree density on pasture production in Wellington Catchment.
(3) A hydrological study of a catchment in the Kent River district.
(4) Various agronomic trials associated with establishing shrubs and grasses on saltland.
(5) An alternative plants study for salinity control
(6) Associated with drainage trials also.

NAME

J.J. Havel PH: 093 676 333

ORGANIZATION

Forests Dept. of W.A.
PO Box 104
COMO W.A. 6152

AREA OF INTEREST

Fodder and food trees grown to augment stock carrying capacity.

CURRENT PROJECTS

Involved only at research coordination level.

NAME

Kerry Hawley PH: 097 711299

ORGANIZATION

Department of Agriculture
Rose Street
MANJIMUP W.A. 6258

AREA OF INTEREST

Livestock, pasture and crop production

CURRENT PROJECTS

An examination of the benefits of fodder trees in agricultural production in W.A. (See article 'will trees change the future of agriculture?', this issue of Agroforestry Update.

Officers involved in conducting this project are -

1. John Karlsson, Veterinary Officer
Department of Agriculture
Manjimup and Bridgetown

2. Bevan Kingdon
Agricultural Adviser
Department of Agriculture Manjimup

3. Yours truly
Officer in Charge
Manjimup

4. Officers of Division of Resource Management
Department of Agriculture
SOUTH PERTH

NAME

Beyan Kingdon PH: 097 711299

ORGANIZATION

Department of Agriculture
Rose Street
MANJIMUP W.A. 6258

AREA OF INTEREST

Research and extension of the use of agroforestry in native vegetation (Jarrah and Karri) by under sowing with legume pasture species, and the use of native fodder trees (lucerne tree and Tamarisk trees) in agriculture for salinity, shelter and fodder.

CURRENT PROJECTS

- Pasture Development in Native Forests trial, which is the establishment of sub clover pastures under a native jarrah tree forest.

- Lucerne Tree Shelter Belt Project, which is assessing the lucerne tree for salinity control (lowering of water table), shelter for sheep and fodder for sheep over the summer period.

NAME

Mr L. McCulloch PH: (09) 3760111 (X 656)

ORGANIZATION

W.A. Dept. of Agriculture
Jarrah Road
SOUTH PERTH W.A. 6155

AREA OF INTEREST

Trees and Salinity
Trees and windbreaks

CURRENT PROJECTS

1. Currently reviewing two above areas of interest
2. Planned - windbreak/soil erosion study

NAME

Richard Moore PH: 097/521 677

ORGANIZATION

C/- Forests Department (Research Section)
Queens Street
Busselton W.A. 6280

AREA OF INTEREST

(i) The Pine/Grazing System
- thinning and pruning regimes and techniques
- mulching

(ii) Grazing amongst widely
Spaced eucalypts (replanted farmland)

CURRENT PROJECTS

Fulltime agroforestry research

(i) Cooperative research with CSIRO (Geoff Anderson) at Mundaring, W.A. Looking at total production under various combinations of trees and pasture in 750 mm rainfall area (salinity control zone).

(ii) The combination of widely spaced pine and grazing in high rainfall area
Busselton, Sunkland, 1000 + mm rainfall.
Major joint trial with Dept of Ag.
Other studies looking at thinning, pruning and mulching
Mechanical pruning and mulching equipment being tested

(iii) Collie River Catchment

- grazing amongst eucalypts planted on farmland
- effect of tree density
- cropping between strips of pines

(iv) Esperance

- joint project with Ag. Dept.
- wide spaced pine and pine in strips, erosion control shelter, timber production values.

NAME

Andrew Thamo PH: 097 641113

ORGANIZATION

Smalltree Farm
Box 27
BALINGUP 6253

AREA OF INTEREST

Farmer slowly developing agroforestry on property
Farm Tree nurseryman growing large variety of farm and fodder trees for south-west W.A. and wheatbelt.

CURRENT PROJECTS

Propagating and investigating salt tolerant poplars, tree lucerne cork and other oaks carob, honey locust, willows etc.

NEW ZEALAND

NAME

Don Bond PH: 479579 ROTORUA

ORGANIZATION

Ministry of Agriculture and Fisheries
PO Box 951
ROTORUA
NEW ZEALAND

AREA OF INTEREST

Performance of animals and pasture under different densities of Pinus radiata.

CURRENT PROJECTS

Acting technical Officer-in-charge Tikitere farm forest research area.

NAME

John Cawston PH: 80089 ROTORUA

ORGANIZATION

New Zealand Forest Service
PO Box 1340
ROTORUA
NEW ZEALAND

AREA OF INTEREST

All aspects of private forestry Rotorua Conservancy. Particularly integration of farming/forestry/soil conservation on farms.

CURRENT PROJECTS

Special purpose species survey Rotorua Conservancy Agroforestry system Mamaku Plateau. Pulp post products from 8-10 yr old farm woodlots (thinnings).

NAME

Deric Charlton PH: Palmerston North 68 019

ORGANIZATION

Grasslands Division
Dept. of Scientific and Industrial Research
Private Bag
PALMERSTON NORTH NEW ZEALAND

AREA OF INTEREST

Legumes for nitrogen production and grazing in exotic pine and gum forests.

CURRENT PROJECTS

Evaluating 36 legume species in collaboration with L.R. Knowles and Ruth L. Gadgil (Forest Research Institute) in State Pine Forest at Rotorua, with a view to determining their ability to fix nitrogen under trees and to perform well when grazed in forest situations.

NAME

Maurice J. Duncan PH: 530815

ORGANIZATION

Water and Soil Science Centre
Ministry of Works and Development
PO Box 1479
CHRISTCHURCH
NEW ZEALAND

AREA OF INTEREST

Research on the hydrology of pine and/or pasture catchments.

CURRENT PROJECTS

As above.

NAME

John W. Edmonds PH: 779 662

ORGANIZATION

C/- N.Z. Forest Service
Box 495
DUNEDIN
NEW ZEALAND

AREA OF INTEREST

Agroforestry, especially related to P. radiata silviculture.

CURRENT PROJECTS

Agroforestry extension.

NAME

Mark Farnsworth PH: Kargaville 5455

ORGANIZATION

Pouto Forest Farm Ltd
Pouto
R.D.I. Tekopuru
NEW ZEALAND

AREA OF INTEREST

- practical applications of agroforestry
- research in the integration of Pinus radiata with mixed livestock grazing in Northland N.Z.
- forest influences on microclimates

CURRENT PROJECTS

- Evaluation of 'variable' pruning lifts for practical agroforestry
- evaluation of 'Mycorrhizal inoculation,' at establishment, of Pinus radiata to be planted into pasture
- Evaluation of management strategies for practical agroforestry
- the influence of Pinus radiata, on selected climatic parameters.

NAME

R.E. Fitzgerald PH: 8053 RANGIORA

ORGANIZATION

Forest Research Institute
PO Box 31 011
CHRISTCHURCH
NEW ZEALAND

AREA OF INTEREST

Production forestry research - soils and site productivity. Nutrition of Forest Stands.

CURRENT PROJECTS

Fertiliser trials - at establishment - in established stands
Legume trials - in forest soils - on dredge railings

NAME

Dr Allan Gillingham

ORGANIZATION

Whatawhata Hill Country
Research Station
Private Bag
HAMILTON
NEW ZEALAND

AREA OF INTEREST

(1) Agroforestry on steep hill country
(2) Fertiliser requirements of hill pastures

CURRENT PROJECTS

(1) Assessment of the effect of tree density on pasture and animal production and other associated factors

(2) Assessment of factors influencing the maintenance P requirements of hill pastures

(3) Mechanisms of lime response by hill pastures

(4) Effect of season, aspect, slope and pasture species composition on response to N fertiliser

NAME

Dinah Hansman PH: 252 041

ORGANIZATION

PO Box 26
Lincoln College
Canterbury
NEW ZEALAND Sept. to Nov. 1983
April 1984 to Oct. 1984

66 Alexandra Ave
Rose Park
S.A. 5067 Dec 1983 to April 1984

AREA OF INTEREST

Currently studying for a Masters Thesis in Horticultural Science, specializing propagation at Lincoln University College of Agriculture, Canterbury, N.Z. Areas of interest include nut trees, fodder trees, and shelter trees, and the incorporation of multi-use trees into farming systems.

NAME

Martin Hawke PH: ROTORUA 479 579

ORGANIZATION

Ministry of Agriculture and Fisheries
PO Box 951
ROTORUA
NEW ZEALAND

AREA OF INTEREST

Agroforestry research in temperate zones

CURRENT PROJECTS

Officer in Charge of Tikitere Forest Farming Research Area, Rotorua N.Z.
Animal performance and behaviour in trees
Microclimate studies under different tree densities
Extension role - grazing management and research results to Advisers, farmers and organisations in N. Island, N.Z.

NAME

Jack M. Hawthorn PH: Rotorua 89219

ORGANIZATION

Forestry Specialist
Ivon Watkins-Dow Ltd
9 Westbourne Ave
ROTORUA
NEW ZEALAND

AREA OF INTEREST

Use of agricultural chemicals in forestry, particularly site preparation and releasing. Broad interest in all aspects of establishment and silviculture, agroforestry included.

CURRENT PROJECTS

Establishment of new treatments for gorse, acacia, and other brushweed releasing. Expansion of existing site preparation and grass releasing techniques.

NAME

Alan Koehler PH: ROTORUA 457674

ORGANIZATION

Forest Research Institute
Private Bag
ROTORUA
NEW ZEALAND

AREA OF INTEREST

Researching combinations of livestock and trees on the same area of land, aimed at diversifying and improving the profitability of New Zealand hill country farmland. (Radiata pine main tree species used) Pinus radiata silviculture.

CURRENT PROJECTS

1) Studying effect of pruning intensity on growth of P. radiata planted at wide spacing on pasture

2) Comparing variable lift and standard 3 lift pruning in terms of diameter over stubs achieved and effect on tree growth

3) Silvicultural tending and measurement of farm forestry trials within the central North Island includes the Tikitere trial. Analysis of data from same

4) Working on projects associated with the Radiata Pine Task Force. The Task force has developed and continues to improve a computer system (SILMOD) for modelling the growth, harvesting and processing of stands of radiata pine managed on specified silvicultural regimes. It may be used to evaluate the effects of alternative site variables, silvicultural regimes, and processing variables on stand profitability

5) Developing methods of quantifying variation in young stands along with liaison with N.Z. Forest service work study group in developing standards and the silvicultural equipment research group in developing equipment for variable height pruning of radiata pine.

NAME

Leith Knowles PH: 479 879

ORGANIZATION

Forest Research Institute
P.B. Rotorua
NEW ZEALAND

AREA OF INTEREST

Research into the integration of production forestry and pastoral agriculture to increase profit per hectare, particularly on hill country.

CURRENT PROJECTS

. Evaluation of various tree/pasture combinations using radiata pine

. Construction of a computer based simulation model for managing radiata pine, and for predicting effects of trees on pasture and livestock

. Evaluation of forage legumes suitable for grazing in forest plantations

. Silviculture of radiata pine

NAME

Gavin McKenzie PH: 721569 Ex 788

ORGANIZATION

N.Z. Forest Service
Private Bag
WELLINGTON
NEW ZEALAND

AREA OF INTEREST

Tree use by other private landowner and the provision of a government extension service.

CURRENT PROJECTS

- Implementation of a revised Forestry Encouragement Grant incentive scheme for all private sector commercial forest growers to be introduced on 1.4.83.

- Provision of a balanced advisory service to those in the private sector who are interested in forestry as a land use. Such advice will cover all commercial aspects of tree growing as well as agricultural shelter and associated topics

- Development of courses and educational material for the benefit of both forest extension officers and private forest growers.

NAME

Dennis Neilson PH: 076 33629

ORGANIZATION

Manager
Northern Region
Tasman Forestry Ltd
PO Box 105
KAWERAU N.Z.

AREA OF INTEREST

Agro forestry Research
Extension of Research results to commercial stands
Application in farm forestry joint ventures

CURRENT PROJECTS

NAME

Neil Percival

ORGANIZATION

Ministry Agriculture and Fisheries
PO Box 951
ROTORUA
NEW ZEALAND

AREAS OF INTEREST

Agronomist

CURRENT PROJECTS

Tikitere Forest Farming Research Project Waratah Forest Grazing Project.

NAME

Richardson Dr S.A. PH: Wellington, N2 722474

ORGANIZATION

Forestry Council
Box 5052
WELLINGTON
NEW ZEALAND

AREA OF INTEREST

Agroforestry in the Asian Pacific Region

CURRENT PROJECTS

Review of Agroforestry Education in the South Pacific - see article 'Agroforestry education', this issue Agroforestry Update.

NAME

J.G. Rawson PH: 71 389 Whangarei

ORGANIZATION

5 Rata Place
WHANGAREI

AREA OF INTEREST

Forest Consultant

CURRENT PROJECTS

NAME

R.H. Webster PH: Ak. 412 8514

ORGANIZATION

New Zealand Forest Service
R.D. 2
Kumeu
AUCKLAND N.Z.

AREA OF INTEREST

Advantages from grazing of existing forest stands

CURRENT PROJECTS

- The use of grazing to control pampas grass competition to trees.

- The use of forage legumes to suppress the invasion of pampas grass in forest stands.

AFRICA

NAME

Robyn Haney (Miss) PH: Harare (Zimbabwe) 706216 (w)

ORGANIZATION

(Forest Economist)
C/- Forestry Commission
Box 8111,
CAUSEWAY HARARE ZIMBABWE

AREA OF INTEREST

All aspects of agroforestry; in particular the management and economics of multi-purpose tree crops in agri-silviculture or silvo-pastoral systems. Hope shortly to undertake full-time research on the socio-economics of one or several tropical fuelwood agroforestry systems. Interested in the use of Australian species in African agroforestry, and encouraging use of indigenous species, particularly N-fixing species and fodder trees.

CURRENT PROJECTS

1. Investigation into suitable tree species and crop combinations for Southern African semi-arid zone agroforestry.
2. Promotion of agroforestry in the rural areas of Zimbabwe; writing information material for foresters and farmers.
3. Production of an education film on agro-forestry for Zimbabwean peasant farmers.
4. Initiation of research on the economics of agroforestry, including literature survey (contributions welcome).

PACIFIC

NAME

Dr T.I.W. Bell PH: 62942

ORGANIZATION

PO Box 521
LAUTOKA
FIJI

AREAS OF INTEREST

Grazing in plantations Fuelwood

CURRENT PROJECTS

- Energy plantations in the Fiji dry zone

- Tree spacing and cattle grazing in young Pinus caribaea plantations in Fiji.

For more information refer to 'Abstracts', this issue Agroforestry Update.

NAME

B. Carrad PH: 722863 (work)
721158 (home)

ORGANIZATION

Coffee Farming Systems
Research Project, Dept. of Primary Industry
PO Box 1064 Goroka E.H.P.
PAPUA NEW GUINEA

AREA OF INTEREST

Farming Systems Research
Perennial Crop Economics

CURRENT PROJECTS

As above. Enclosed a copy of project description in Cottee Industry Board Research Newsletter Vol 1 No. 1 (pp7-10).

NAME

Ian Knight PH: Honiara 621 Ext 67

ORGANIZATION

Permanent Secretary
Ministry of Home Affairs and National Development
PO Box G13
HONIARA
SOLOMON ISLANDS

AREA OF INTEREST

Optimising animal production from agroforestry in the wet tropics

CURRENT PROJECTS

Cattle Under Trees Project, Solomon Islands.

CURRENT PROJECTS

NAME

Napoleon T. Vergara PH: (808) 944 7249

ORGANIZATION

Environment & Policy Institute
East-West Center
1777 East-West Road
Honolulu HAWAII, U.S.A. 96848

AREA OF INTEREST

Environmental, socio-economic and policy issues in Integrated (i.e. agriculture & forestry) land use.

CURRENT PROJECTS

1. Assessment of environmental and socio-economic impacts of agroforestry land use systems on fragile uplands in the humid Asia-Pacific tropics.
2. Agroforestry training for forestry extension workers in selected Asia-Pacific countries.

Please include me in the distribution list for Agroforestry Update No 3. I understand that the information below will be distributed in the next issue for the information of others working in the area of agroforestry.

NAME **PH:**

ORGANIZATION (COMPLETE POSTAL ADDRESS PLEASE) **Postcode**

AREA OF INTEREST

CURRENT PROJECTS

NAMES OF OTHER PEOPLE WHO YOU THINK WOULD BE INTERESTED

ITEMS FOR INCLUSION IN THIRD ISSUE

(News items, visits, paper abstracts, summaries of old/interim/new/proposed projects, field days, conferences, thoughts about meetings, collaboration, research and information needs, etc. etc.)

RETURN TO:

AGROFORESTRY UPDATE, CSIRO FOREST RESEARCH, PO BOX 4008, QUEEN VICTORIA TERRACE A.C.T. 2600

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