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It is just as well that the editor forewarns the reader that the authors present diverse views on key forestry issues and that some of the chapters present opposing views. Otherwise, one might be tempted to put the book down after Chapter 3 on Deforestation: problems, causes and concerns. The balance to this monetarist philosophy is provided in Chapter 5, by George Woodwell, on the Role of Forests in Climatic Change. He asks: "Is there a way now of managing forests and land to support people without the progressive biotic impoverishment that has marked the advance of civilisation throughout time?" He acknowledges that the issue is highly political as well as technically complex and claims that avarice is inborn, whilst ecology is slowly learned.

Touchy Issue

Like some of the other contributing authors, Woodwell alludes to a touchy issue, spelt out by Kanowski *et al* in Chapter 14 on Plantation Forestry: "Politicians pay lip service to the importance of trees and forestry while becoming wealthy on the illegal proceeds of exploited and often subsequently degraded forests", and "nearly all the constraints relate to people" as "the scientific and technical approaches to plantation forestry are relatively well understood and the problems are not generally difficult to overcome". Though somewhat overstating their case, the general thrust could have been explored more deeply, for corruption at all levels is a major issue. But why does it occur and can it be minimised? What is the role of the First World in all this and what are development agencies doing about it? The sad fact is that billions of dollars of development funds are being thrown at ill-defined forestry (and other) development projects. Whilst we can condemn exploitive and corrupt individuals present in all societies, who is to blame the destitute for helping themselves whilst they can?

The outline presented by Nair (Chapter 15) for the production of multiple outputs, whilst protecting fragile environments through agroforestry is more pointed, as it stresses the importance of socio-cultural values and economic and financial returns. Cernea goes the final step when he advocates putting people at the centre of forestry, whilst discussing social forestry in Chapter 12. This approach "... breaks radically with the stereotypical assumption that forest growth is only the business of professional foresters or of Mother Nature".

Ducks in the bedroom, fish on the roof

In the single bedroom of a third-floor apartment in Guilin (in China's Sichuan Province) a government worker keeps 16 white ducks. Nearby, the flat roof of a similar living block has been flooded and sealed to accommodate a shoal of fish. Both are "sideline" production endeavours, highly successful in rural China under reform policies, and subsequently encouraged among members of State work units, even in the cramped living quarters of urban dwellings.

Cramped they are indeed: the living space in various Chinese cities (per capita in sq. m) ranges from 2.22 in Chengdu to 4.91 in Beijing. The absolute poverty rating is 2 m² and there are many examples. In rural China, the living areas are bigger (averaging 5.5 m²) and the "construction area" (including service rooms), 11 m². Moreover, peasant farmers own their houses: even at the height of ideological purity in Mao Dzedong's China, no one was foolish enough to confiscate them. Sideline production from (mainly) "private plots" was another matter. In the 1960s there was bitter controversy over the distribution of the proceeds from sales of such production. Because of changing and conflicting policies over these "tails of capitalism", farmers were reluctant to grow other than short-term crops and livestock. If they were allocated land with trees on it, for example, they moved quickly to cut them down in case the policies changed.

At the end of 1978, the leadership reasserted the legitimacy of private plots, "domestic side occupations" and rural free-markets. The response was dramatic

— net incomes to peasant farmers from their sidelines increased by 500% in four years. As well, the contract system of net output delivery by households from collectively owned land — the Baogan DaoHu — led to the devolution of decision making, the application of market mechanisms to rural industry, land leasing and (limited) inheritance. With the eclipse of the doctrinaire ideologues (who, in the earthy imagery of Deng Xiaoping, "occupy the lavatory but only fart") market socialism had arrived in China.

Sideline production quickly spread to the State sector and threatens to run out of control, with more and more time devoted to marketable goods (the proceeds of which are shared between the enterprise and the individual) than to the formal purpose of the organisation. Forest nurseries grow ginseng and research institutes raise rabbits. The Beijing Zoo operates a high-class restaurant serving meat and poultry from exotic zoo animals and birds; stewed bear paw and pangolin (both protected species) appear on its menu. The Peoples Liberation Army (PLA) cooperates with the Forestry Bureau in North East China to mount high-cost safaris promising a range of trophy wild life: protected species shot "in error" attract previously agreed "fines" which (on a list prepared in 1986) range from \$US20,000 for a Manchurian tiger, through \$US10,000 for a leopard, to \$US5 for a humble wild rabbit. As in other countries, *Cannabis* is grown in National Forests; in State Timber Corporation log yards, edible wood-rotting mushrooms are carefully nurtured.

The opening of China to the outside world (and the hosting of the 11th ASIAD) aroused interest in historic imperial cuisine, and, especially, in ingredients which are rare, expensive and reputedly possessed of mysterious powers in the classical pharmacopoeia. They are highly prized and ideal for sideline production. Thus, quails and snakes are being farmed in batteries; herbs and medicinal plants are raised in window boxes in city dormitories (and on precarious platforms cantilevered out from balconies to create a little more space in the multi-storey apartment blocks); ducks are herded in bedrooms; there are fishermen on the roofs.

The final two chapters of this otherwise provoking book are a bit of a let down as there are a lot of normative statements about the policy changes that are deemed necessary to bring about sustainable development. The question remains: how are we going to get there if we continue to skirt around the real conflict between the present worldview, attitudes and lifestyles of the 'rich' and the need to maintain ecological integrity? This is by no means a mere Third World problem and we in the First World could well apply some of the prescriptions to ourselves.

A.J. Tilling

(Continued on Page 44)

In our Contemporaries

Judy Griffith

What's New in Forest Research

- No. 225** Paulownia – The timber of the future?
No. 226 Market trends for paulownia timber in Japan
No. 227 Sudden decline of cabbage trees (ti kouka) – How bad, how extensive?

New Zealand Journal of Forestry Science

Douglas fir, Japanese larch, and European larch in pure and mixed stands

West G.G. Vol. 21(1): 3-9 (1991)

An area of pure and mixed stands, with two thinning treatments, in Kaingaroa Forest was studied from age 19 to 32 years. Although early growth of Japanese larch was superior on this site, Douglas fir is likely to be the most productive of the three species at the end of the rotation. Results confirm that manual thinning to achieve a desired regime should remain the preferred management technique for Douglas fir in New Zealand.

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Eucalyptus species selection for soil conservation in seasonally dry hill country

Bullock B.T. Vol. 21(1): 10-31 (1991)

Species selection trials on drought-prone hillsides in the Wairarapa district included over 120 provenances of eucalypts drawn from over 60 species. The trial sites of Pakaraka and Kahuiti, planted in 1976, were re-assessed in 1991 after an earlier comprehensive measurement in 1984.

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Genotype x environment interaction and optimal number of progeny test sites for improving *Pinus radiata* in New Zealand

Carson S.D. Vol. 21(1): 32-49 (1991)

A progeny test of 25 parents was established on 11 sites chosen to represent all major site types in New Zealand. Statistical analysis of an assessment at age nine years suggested that genotype x interaction was important for diameter. However, multi-site index selection suggested that regionalisation of seed orchards would increase average genetic gain in diameter over all sites only slightly. Many fewer than 11 sites were required for selection in order to capture essentially all of the predicted genetic gain for a national programme.

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Apparent phosphorus uptake and change in nitrogen content of *Pinus radiata* growing on soils of different phosphorus retention, treated with superphosphate and A-grade rock phosphate.

Hunter I.R., Hunter J.A.C. Vol. 21(1): 50-61 (1991)

Seven years after the fertiliser was applied, the treated plots contained approximately 10% of the applied phosphorus. A further 3% was present in the forest floor. The marked difference in phosphorus retention characteristics between the sites appeared to have little effect on utilisation of applied phosphorus by the trees. Rock phosphate was as effective a fertiliser as superphosphate, and the difference in nitrogen content after phosphorus application was inconsistent.

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Varying selection ratios (initial versus final crop stocking) in *Pinus radiata* evaluated with the use of MARVL

Maclaren J.P., Kimberley M.O. Vol. 21(1): 62-76 (1991)

There was an apparent site index differential of 1.6 m between selection extremes, attributable mainly to differences in initial stocking rather than to the effect of selecting taller trees. There was no significant difference in mean dbh due to selection ratio. Straightness of both the unpruned logs and the pruned butts

was enhanced with increasing selection. By increasing selection ratio, total merchantable volume and pruned volume were substantially improved, owing to height differences and reduced malformation.

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Market requirements for *Pinus radiata* clearwood: Implications of length specifications

Horgan G.P. Vol. 21(1): 77-95 (1991)

Clearwood is defined as defect-free solid wood of any length. Analysis of the markets for clearwood reveals that they are niche ones, and frequently the lengths of clearwood required are quite short, although some markets, notably mouldings and veneers, require longer lengths. Many users could use short length clears but are reluctant to shift away from the use of long lengths because of the perceived loss of flexibility.

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Properties of treated and untreated *Pinus radiata* plywood after 12 years' weathering

McLaughlan J.M. Vol. 21(1): 96-110 (1991)

The trial included three adhesive types, five preservative treatments and four surface/exposure treatments. Panels were tested prior to exposure and then after one, two, four and 12 years. All wood failure declined significantly over time in plywood with veneers treated to 5 kg CCA/m³. Uncoated melamine-urea formaldehyde panels failed completely after 12 years and delaminations occurred in panels of the other adhesive types. Uncoated panels treated with CCA fared less well than the untreated panels or those treated with copper naphthenate.

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FRI Bulletins

- No. 176** Chemical modification of lignocellulose

Plackett, D.V., Dunningham, E.A. (1992)
\$50 + GST

This symposium was held in Rotorua, November 7-8, 1992. Papers presented described wood modification research in the United States, Japan, Sweden, Indonesia, Australia, and New Zealand. Sessions included acetylated wood products,

thermoplasticisation of wood, and new materials from modified wood.

No. 177 Pacific Rim Bio-based Composites Symposium

Plackett, D.V., Dunningham, E.A. (1992)
\$70.00 + G.S.T.

This symposium was held at Rotorua,

November 9-13, 1992. Papers covered all aspects of manufacturing and performance of composite products from wood, and some other natural fibres. They reflected an increasing research focus on utilisation of low-value waste materials from the forest industry to create new high-value products.

Ducks in the bedroom

(continued)

In more conventional environments, there is a burgeoning interest in deer farming. The pilose antlers of deer have long been highly regarded medicinally – for the invigoration of reproduction, increasing libido, the nourishment of marrow and blood, to strengthening of muscle and bone, and the improvement of debility, hearing, vision, dizziness and dysentery. Most parts of the deer are “health foods” in China – tails, genitals, sinews, blood, meat, bones – even embryos and slinks (aborted foetuses); increasingly, such exotica are garnered and prepared as “sidelines”; the Guangdong branch of the Timber Import and Export Corporation advertises 159 crude medicinal herbs (many of them with no English or pharmacopaeian Latin names), eight essential oils, seven medicinal minerals and 195 natural product medicines for the treatment of every conceivable condition (and some quite beyond the imagination).

Success – as well as failure – in sideline production may pose problems. There

are stories of sabotage of successful operations by less competent neighbours; and of over-enthusiasm for the sideline leading to neglect of the central purpose of the enterprise. The economist Prybly notes that when bureaucrats become businessmen they behave more like black-market dealers than capitalists. And the problems of switching from “command” to “guidance” planning are formidable. Responsibility at enterprise management level may rest with the lost generation of the Cultural Revolution – uneducated, insecure and resentful victims of China’s biggest political disaster. Anthony Lawrence has written: “China is a labyrinth of human relationships: factions weaving behind the scenes; international networks of mutual obligations; old men hanging on to perquisites; long-term revenge-seekers waiting in the wings”. It sounds just like New Zealand.

Farmers More Articulate

There is evidence that the old men are indeed hanging on, and that some re-collectivisation is taking place. Supposedly long-term land holding contracts have been cancelled; free-markets are being distorted by local taxation practices; decentralisation of control of natural resources (to autonomous minority areas) is accompanied by much closer controls by local bureaucracies (the “mothers-in-law”); provincial protectionism is growing. “Guidelines” have in fact become inflexible prescriptions which ignore micro-environments, whether geographic or economic. The spurious double-speak slogans of the command society are re-emerging, and bring to mind the inchoate jargon of our own corporate missionaries. At the same time, farmers are becoming more articulate and ingenious in their own defence. A puzzling feature of visits to village sawmills in Henan last year was the constant repetition of claims by sawmillers to be cutting “on contract”; they would not acknowledge ownership

of logs. Eventually, the explanation emerged: at every stage in the chain from growing tree to processed product, there are taxes, some prescribed by the central Government, but many imposed erratically by provinces and counties. In Sichuan, at least seven taxes are imposed and, in Yunnan, the burden is such that the farmers refer to plantation trees as cigarette trees because, by the time all taxes have been levied, they are worth no more than the price of a cigarette!

‘Community Tourism’

Problems of local taxation are real, with the central Government having to engage in negotiations to obtain its share. There are stories of “commodity tourism” – the movement of commodities across jurisdictional boundaries and back again in order to attract subsidies and enable taxation (just like the EC!). I have written elsewhere: “If revolution comes again to China, it will owe little to the supposed democrats who sought media coverage at Tienanmen in June 1989. It will come from the farmers and the specialised householders who have had the satisfaction of making their own decisions and profiting from them; and who fear the ever-growing army of bureaucrats who usurp power without responsibility.”

Advice for Visitors

Present-day visitors to China – unlike those of earlier decades – are amply provided with economic statistics. But they tell only part of the story. The anthropologist Fei Xiaotong advises visitors to “look for the invisible”. Remember, if you will, the Sichuan fisherman in his poor man’s penthouse, insulated from the extremes of winter and summer by a living larder. And wonder perhaps, as I do, if the duck herder has a mother-in-law!

Dennis Richardson

MARUBENI AND RAIN FOREST PROJECT

Much criticism has been levelled at the Japanese trading companies for their involvement in rain forest felling in South East Asia, with Mitsubishi Corporation a particular target. The companies are sensitive to the criticism and are taking steps to improve their environmental reputations. Marubeni’s environmental division is now running a research project related to rain forest regeneration in Sarawak, with the involvement of Japanese and American researchers as well as the Sarawak Forestry Bureau. The project is focusing on animal and plant ecology related to the forest crown as well as the linkages between biological and climatic factors. – **Reprinted from Japanlink, Ministry of Forestry, Rotorua.**