EDITORIAL COMMENT

The Professional and the N.Z. Institute of Foresters

George Orwell had a major thesis running through much of his published work—that debasement of standards in politics, ethics and social intercourse generally is related to, and perhaps follows, the debasement of language. The pigs in Animal Farm coined the convenient aphorism: “All animals are equal, but some are more equal than others”; while Big Brother in 1984 represented a bestial dictatorship. This sort of equivocation is occurring too frequently in every sphere, and is one aspect of the spread of trivialization. Apart from debasing values, it confuses. Thus, labour is now often referred to as “staff”; artisans or tradesmen are talked of (by themselves at least) as professionals. The word “professional” thus needs rather careful scrutiny; what does it mean today?

Perhaps the rot started when someone began referring to prostitution as the oldest profession, but whatever the reason the old idea of the professional as one with a considerable degree of skill, integrity and competence, with high ethical standards of service to the community, has rather fallen by the wayside. Too often some of the old-established professional groups appear to be mainly concerned with exactly what exercises the talents of many labour unions—that is, jacking up things to suit their own comfort and convenience (not forgetting their remuneration) albeit in a gentlemanly and discreet way that does not bring the attention of society at large to what they are about.

For some time the forest rangers in this country (and we should recall that several overseas countries view our ranger system with envy) have been irked by what might be termed the “professional elitism” of the N.Z. Institute of Foresters, which allows rapid advancement for those with university degrees, but leaves promotion of other groups to the tender mercies of the Council. True, the criteria used by succeeding councils have been slowly liberalized, but we have still equated “professional” with “university-trained”.

This year’s Annual General Meeting was a milestone in the Institute’s history, where the whole question of professionalism in forestry was debated with charity and forthrightness. There was no doubt about the general feeling of the meeting—to elevate to professional status those with the requisite skills and dedication to their calling, whatever their old school tie might have been. Older graduate foresters, looking back, will realize that a lot of what they were taught was of limited value, but that the training as a whole provided a springboard from which to advance to competence in their particular field. The half-life of their training might now be less than half a working life. And although the initial training of ranger or technician may be of a less complex and elevated standard, yet these men, working directly with trees and soil, acquire a
wealth of experience and competence denied the university graduate, and they become in time responsible directly for dealing with the land, the forest crops, the men and the equipment which together constitute the raw materials of forest management; under their control may be assets valued at millions of dollars. On the other hand, the university graduate may specialize early and have much less impact on the business and progress of forestry.

Council now has the unenviable task of deciding how to define merit for advancement to full member. The meeting made it clear that members put merit at rather a high level: they want it to be an honour to advance to full member of the Institute, and this is as it should be, for it means that we are thinking of the professional as one who has made, or is making, valuable contributions to forestry—someone with skill and competence devoted to the furtherance of his profession and of the good of his community. If future councils can keep this consistently in mind, no one need feel dubious about the future value or the strength of the Institute.

**Loyalty and Integrity**

The questions of loyalty and integrity were hotly debated at the 1974 Annual General Meeting of the Institute. Some took the view that one should be loyal to one’s employer; others that one should be loyal to one’s profession. Either way, one’s integrity is at risk. Some felt that the profession needed to be known publicly at all costs; others that we should stick to our field of competence, however tempted we might be to stray, and however difficult it might be to define the sphere of our interests.

The problem is again that foresters are a new kind of professional. The old-style professional worked on his own or as a partner in a small firm. He might belong to some form of association with a code of ethics to which he would automatically subscribe, but his conscience defined what he could or could not do. At present foresters, by and large, are employed by big business or big government, in which many decisions are made in a political or bureaucratic atmosphere. In any big organization there tends to be a dislike of anyone rocking the boat, and the dead hand of conformity is only too likely to rest heavily on any would-be nonconformist. But, as George Bernard Shaw delighted to point out, nearly all advances are made by minorities—often the outright minority of one person—and it has become obvious to more enlightened businesses that insistence on conformity puts any organization on the road to stagnation and decay.

Jack Westoby, in a stimulating public address at Rotorua in October 1969 (*N.Z. Journal of Forestry, Vol. 15(1)*) stressed the absolute necessity of encouraging the odd-ball and the maverick, and the body of foresters in New Zealand has for many years been yeasty with new ideas. The large companies and the State (viewed with dubiety or even outright hostility by some members of the Institute) should take heed of this and encourage innovation. In the light of rapidly changing
circumstances, which currently seem to be accelerating, any organization must keep its options open and seek diversity in order to meet future challenges.

But if in fact the large forestry organizations discourage any divergence from official policy, what is the forester to do to maintain his integrity? John Purey-Cust, in the A.G.M. colloquia on the Institute’s policy in the 1980s, said: "It seems we have three options open to us, and two of them are not very pleasant... The first is that we go the way of professions who are in fact merely restrictive and highly monopolistic trade unions... Secondly we could... act as a public relations man or a whitewashing man who dances about in front of the profession waving brightly-coloured banners and exhortative slogans. The third possibility is that the Institute becomes much more the conscience of the profession, which means that it inevitably must step on toes on every issue that concerns forestry: in fact that it questions the wisdom of the major decisions that are made in forestry, and that it tries to raise questions that have to be answered by the profession before outside people raise them when they feel they are not being answered." There was no doubt that the sympathy of the meeting lay with the last interpretation of the Institute’s role and, although there were some misgivings, it seemed generally agreed that, where a member was unable to make his employer take note of his legitimate objection to the employer’s policies or actions, then that member should be encouraged to "let off steam" within the Institute. If, then, the Institute felt sufficiently concerned, it would take the matter further and lend its weight to right that which seemed to be wrong. One must observe, however, that in some instances the Institute, or the Council, would need to be well informed on contentious issues, and might need a good deal of moral courage to adopt some and to discard others.

It was in this atmosphere that the colloquium on the suggested code of ethics was such a marked success, all ages and degrees of membership being represented in the discussions. The major clause of the code is: "Each member shall act to uphold the dignity, standing and effectiveness of the profession of forestry" and, specifically, that each member has obligations to the public, to his clients, to his employers and to his colleagues. These are spelled out in detail and are to be considered guidelines to behaviour. On the whole they strike a good balance between loyalties and integrity.

Although it cannot be denied that forestry organizations have sometimes been guilty of misinformation, propaganda and myth-making, the Institute through the years has, on the whole, been true to itself. Malcolm Conway, in his Presidential Address in 1969 (Volume 15(2)) drew attention to this, and the more recent submissions on Manapouri and the beech schemes are in the same tradition. May it ever be so, for if we stick to our own area of expertise we remain credible and forceful. If we step outside it into the realm of opinion and surmise we are bound to be caught out by those who know better. We ought to be warned by a recent publication of the N.Z. Ecological Society ("An Ecological Approach to New
Zealand’s Future”, reviewed in this issue of the Journal in which facts are slanted or presented in an ambiguous or imprecise way and conclusions do not follow logically from a very generalized discussion. Publications such as this are grist to the preservationists’ mill, whereas the Institute, as a body of dedicated conservationists and applied ecologists, should be attacking misinformation and propaganda root and branch.

As Tony Grayburn pointed out, we must not only do the right thing, but we must be seen and known to do the right thing. Then there would be no need for special publicity to give us an image. As was said many years ago: “By your fruits shall you be known.”

The Ebullient Forestry Scene

The ferment of new ideas emanating from the forest economics group at the Forest Research Institute, originally triggered off by the pioneering work of Dr R. Fenton, is a remarkable phenomenon. First there is what one might call the new silviculture (with some acknowledgement to Craib’s work in South Africa) and more recently the tree/grass amalgam, but this group of extremely active young men are delving into all aspects of forestry from establishment to felling and utilization, and their penetrating evaluations are perhaps upsetting traditionalists and showing up forest management lore for what it is.

However, one should not be too easily carried away by the encouraging results of short-term research into over-enthusiastic extrapolation. For there is no reason to suppose that the early findings have universal validity, nor that management practices on one (or a few) sites can be transferred uncritically to all sites. There are one or two straws in the wind to make one pause, or at least look rather critically at these new ideas. The odd man out, which appears to have rejected the new gospel, is N.Z. Forest Products Limited. One can be sure that this company, with Brian Allison in the economist’s seat, has done its homework with considerable care and expertise, and that the new ideas do not, for some reason, apply to its particular circumstances. It would indeed be valuable if these reasons could be better publicized, if only so that foresters could be supplied with alternative ideas. For similar circumstances are bound to arise elsewhere. For example, Dr A. F. Wilson, in a paper delivered to the A.G.M., pointed out that a Hawke’s Bay pulpmill plans to double its pulp capacity in 1976. It will no doubt ask for, and obtain, wood from local State Forests. It would therefore seem illogical to adopt the “short-rotation” sawlog regime in these forests. Similarly, A. P. Thomson has drawn attention to the likely development of a new pulpmill every few years in New Zealand after about 1990. These will devour crops already planted, which are now being treated intensively to produce high-grade sawlogs. There is no doubt where these logs will go if the pulp industries find themselves short of raw material. It does not need a genius to observe that, with two thousand million people in our near north clamouring for literacy, the demand for re-
constituted wood will be prodigious. The likelihood of a lucrative export of undistinguished karitane-coloured clear boards of radiata pine to the U.S.A. seems less certain. But crystal-gazing is, however enticing, a practice of doubtful worth. Over the past twenty-five years an army of economists, indicative planners et al. ad nauseam in the agricultural sphere, with a mountain of prognostications, diagnoses, prognoses and pontifications to their debit, have tended on average to be somewhere near 180° wrong. Can forestry seers do better? Because if everyone opts for the short-rotation sawlog regime it is more than likely that factory grade will be reduced to an all-time low in value, and it is this sort of critical factor which can knock economic analyses, however sophisticated, into the proverbial cocked hat. Moreover, with a continuously increasing planting programme, and a rapid expansion in logging and re-establishment, shortages of capital and labour for forestry could well become the critical factors. Indeed, labour shortages are already appearing.

Similarly with grazing and forestry. As the Report of the Committee on Noxious Weeds Administration shows (alarmingly) the management of pasture even without trees is difficult enough; with trees (at least on the majority of soil types) it might become prohibitively difficult. No forester, with his stand reduced to 200 stems/hectare, would relish seeing his grazing herds being steadily ousted by gorse, for example. Similarly, stock management could be greatly complicated by the presence of trees, and in cooler climates it is likely that there will be a critical balance between the amount of open paddock for winter feed crops and for fattening, and the amount of land under trees. Nor is it yet known what effect the constant passage of animals hooves will have on soil conditions and tree health. These are but a few of the gaps in our knowledge.

These criticisms are not intended to decry the efforts of those so ardently pursuing research in this area; they should continue to press on with vigour and determination. Nevertheless, one must be wary of "instant" research results, and the forest manager should, at present, apply their research findings with caution after a careful examination of the likely implications.

New Zealand's Forestry Expertise for Developing Countries

New Zealand is becoming one of the foremost countries in plantation forestry management, and our expertise is being sought by many lands. A measure of this is the number of foresters from this country who are being asked to contribute to IUFRO and other international symposia and conferences, and the fact that in November 1973 the Reproductive Processes Group of IUFRO met in Rotorua; representatives from ten countries attended. The Annual Report of the Forest Research Institute, 1973, lists these contacts (pp. 13-14), together with forest products research being carried out for Samoa and Tonga. Similarly, the Annual Report of the Director-General of Forests for the year ended March 1974 (p. 36) lists contacts
with Indonesia, Papua New Guinea, Fiji, Chile, Peru, Western Samoa and other countries. New Zealand foresters have gone as far afield as Nepal, and the Public Service Official Circular has contained advertisements for staff to assist in developing a large forest area in Peru.

In the field of training, there are frequent visits of FAO Bursars from a number of countries. In mid-1973 a party of some 20 senior foresters from ten countries spent four weeks in New Zealand as part of a study course. Longer-term study courses have been provided for men from Fiji, Korea and Cuba, and in the *N.Z. Herald* of 16 July 1974 it was reported that 50 Fijian forestry workers would come to this country for a year’s training course—a need noted in I. Rennie’s paper in Vol. 19(1) of this journal.

The Prime Minister, during a visit to South East Asia in late 1973, indicated that New Zealand would in future be less concerned with Malaysia and other countries fringing the Asian continent, where aid is fairly freely available from both capitalist and communist governments, and would concentrate more on the Pacific islands.

Indeed, forestry organizations have for some time taken an interest in these areas. A New Zealand company has for some years been logging in Fiji, for example, and in *Forest Industries Review*, Vol. 5(7) of May 1974, it was reported that a company interested in sawmilling, timber treatment and fabrication had been set up to promote trade between Indonesia and New Zealand. However, some foresters are concerned that such contacts are largely designed to exploit the forests, with no particular interest in re-establishing the logged areas, and that this form of exploitation is to be deplored. It is a repetition, in fact, of the early days of development in New Zealand. But it cannot be overlooked that New Zealand adopted this course partly in order to raise capital for development, and also to clear land for other crops. Precisely the same justifiable objectives are to be found in several countries in our near north, where living standards are low and capital hard to come by, and where conversion of wild forest to oil palm and other high-yielding crops appears a better alternative than trying to perpetuate and manage complex tropical forests for sustained yield.

The most active organization in forestry in this area is J. G. Groome and Associates, who recently became the first consulting firm in New Zealand to win an Export Award. The Groome organization is active in West Malaysia, Brunei, Indonesia, Singapore, Fiji, and the British Solomon Islands Protectorate, and seems to be well aware of the long-term potential for forestry in the south-western Pacific. Apart from the enormous forest areas in Papua New Guinea and Irian Raya, three island groups appear to have considerable potential for sustained-yield plantation forestry; British Solomon Islands Protectorate, with about 270,000 hectares, Fiji with 500,000 hectares of forest and also much low-producing land which could be used for plantations, and Western Samoa with about 50,000 hectares of forest and additional land suitable for intensive plantation forestry.
J. G. Groome has recently produced a prospectus on the possibility of setting up pulpwood plantations of *Eucalyptus deglupta* and *Gmelina arborea* on some 37 000 hectares in the Solomon Islands Protectorate, which could be started with fairly modest financial contributions from New Zealand added to the existing larger contributions from Britain. An unusual suggestion is that 70% of New Zealand’s contribution should be expended in the islands for local work, thus providing necessary employment, rather than restricting our offer only for overseas purchases of equipment, secondment of experts, and so on. The growth rates achieved by the selected species (the best of several examined) make radiata pine in New Zealand look almost like a non-starter, and the first harvest, eight years from initial planting, is expected to bring in (at current monetary values) some A$295 000, rising to A$2 281 000 in 25 years’ time. Not only will the scheme provide overseas funds for further development of the country, but will also provide well-paid and compatible work for the local people.

Such proposals bring up the question of whether New Zealand is offering all it could to solve problems in the islands. We have contributed fairly liberally with equipment and experts to the Fijian “Pine Scheme”, but we are not offering to share our expertise elsewhere to any great extent. These countries need to build up their own technical skills and knowledge, and Mr Groome has suggested, rightly, that we could assist with research expertise. The N.Z. Forest Research Institute, with over 50 scientists working in the Production Forestry Division and a further 25 in the Forest Products Division, is comparatively large in relation to the size of the country and the scope of the forest industries. Even a modest diversion of effort to these nearby developing countries could help immeasurably while, with the likelihood of immense demands for forest products in India, China, Japan and South East Asia, anything that can be grown in the islands is likely to find an avid market without in any way affecting New Zealand’s sales of wood products.

**Mechanization of Forest Operations.**

The “axe and mattock” era of forestry is passing away rapidly and, not content with agricultural hand-me-downs, forestry organizations are devoting increasing effort to devising machines and mechanized systems for coping with silvicultural operations from seed collection to final harvesting. It is five and a half years since the Forestry Development Conference recommended “that investigation into the mechanization of logging . . . and thinning techniques . . . should be initiated and/or intensified” and “that the possibility of establishing a research unit . . . to carry out research in operational efficiency, mechanization, sawing, forest transport, and silvicultural operations be explored by the Government and industry”.

The Production Forestry Research Advisory Committee set up a subcommittee to consider how this would be related to the Forest Research Institute, and this subcommittee came to
the conclusion that an organization designed to deal with sawmilling, logging and silviculture would be unnecessarily complicated and unwieldy, since the various engineering aspects are not closely related, and recommended that a body should be set up to deal specifically with mechanization other than logging and utilization. In May 1971 PFRAC endorsed this and in February 1972 the Director-General of Forests agreed to setting up the Silvicultural Equipment Development Committee to “set priorities and targets and to see that within reason there is no deviation from them... The emphasis is to be on equipment development and is to cover the whole range from seed collection through to tree pruning”. Initially, pending the report of the consultants on logging research, the SEDC was to be purely advisory.

In the mean time, the consultants, J. G. Groome and Associates, were asked to produce a report and recommendations on the possibility of setting up a logging research body. This report (“Log Harvesting and Transport in New Zealand”) was presented in November 1972, and advocated setting up a Logging Research Bureau in Rotorua. The subsequent gestation period has been notable for lack of any positive information on the progress of this embryo.

The Forest Research Institute has been actively engaged in research into mechanization of nursery systems, site preparation, planting, thinning, and logging generally. But the body set up to co-ordinate effort (the SEDC) has had precisely the opposite effect to that intended, largely because it has no powers and no money.

In all countries where forest mechanization research has been carried on for some years there has been a universal conclusion—that the only effective method is by co-operation between foresters (in the widest sense), engineers and work study specialists. The foresters define the problem and lay down job specifications; the engineers work from that to mechanical specifications; the work study specialists are concerned with ergonomics and the comfort, convenience, training and motivation of that critical factor, the machine operator. The forests are littered with machinery that never worked because this rule of co-operation has been ignored.

It is therefore disquieting that a prominent engineer, W. Peterson, chose to launch a puerile, offensive and illogical attack on the logging research proposals during the 1974 Conference of the Forest Industries Engineering Association. Nevertheless, the F.I.E.A., (many of whose members clearly had not studied the Groome Report) were opposed to setting up a body to control and co-ordinate logging and transport research. Such professional jealousy is unbecoming, unhelpful and unnecessary, for foresters have for many years expressed the desire to work alongside engineers solving common problems. Such a hostile response from engineers greatly strengthens the need for a body to oversee and direct logging research in this country.

It cannot be claimed that overseas solutions can be, or should be applied directly to our problems; further development of equipment is sure to be necessary, and New Zealand-
ers have shown themselves to be particularly skilful in this field. Moreover, our major problem, from the manufacturing point of view, is a very small market. Dispersed and uncoordinated effort will be costly, and will almost certainly frighten off any would-be manufacturer of forest machinery. New Zealand is a leader in world forestry, moreover, and a combined effort in mechanization would doubtless lead to developments that other countries would be happy to adopt or adapt to their circumstances; this has already happened with nursery machinery, and there is no reason to suppose that it would not happen with developments in the fields of forest establishment, logging and processing.

Carping professional elitism has no place in this context.

**Environmental Impact Reports**

In November 1973 the Commission for the Environment promulgated a document entitled “Environmental Protection and Enhancement: Procedures to be Followed”. This laid down the process of environmental assessment to be followed by Government departments and others in receipt of public moneys for assessing the probable consequences of acting on decisions. An assessment must “begin at the inception of a proposal when there is a real choice between various courses of action including the alternative of doing nothing. It must be an integral part of the decision making process through all the development stages of a proposal through to actual implementation.” It is to be “an objective evaluation setting out . . . with appropriate documentation the consequences of a proposed action . . .” The organization promoting a proposal (whether a Government department or otherwise) is responsible for ensuring that an environmental assessment is carried out in appropriate circumstances. But this does not absolve the proposer from constraints imposed by such legislation as the Town and Country Planning Act 1953 or the Water and Soil Conservation Act 1967.

Impact reports have to be submitted to the appropriate Minister, and are then audited by the Commission for the Environment before being submitted to the Cabinet Works Committee.

In early 1973 a furore arose because of proposals to log tawa in Mangatotara Forest in the Kaimai Ranges, followed by afforestation with pines, the land to be leased to a large forestry company. In September 1973 an environmental impact report was called for, and this was submitted to the Commissioner for the Environment in June 1974, at the same time being made public. The report was prepared by the Rotorua Conservancy of the New Zealand Forest Service, and dealt not only with Mangatotara Forest but also other areas of forest in the Mamaku/Kaimai Range area and adjoining Crown Land. The principal conclusion (para. 58) was that: “Evidence presented in this report leads the Forest Service to conclude that the proposals for Mangatotara State Forest . . . can be implemented, with safeguards, in achieving a sensible
balance between productive use of land and care for the environment”. The proposals would “result in half the area being put to productive exotic forest use with high economic returns, and half being maintained in indigenous vegetation.”

Nevertheless, a careful study suggests that the conclusions are not entirely in keeping with the evidence, and an important observation (para. 50) is omitted from them: “It is debatable whether the desirable objectives mentioned . . . can be attained in full measure by leasing the land to an afforestation company as originally proposed, particularly in view of the Minister of Forests’ decision to designate a Forest Park in the locality . . . Consideration should be given to the Forest Service implementing the management proposals in accordance with the principles of multiple use as an integral part of the proposed Kaimai-Mamaku State Forest Park”.

Public reaction was swift. The Kaimai Settlers Committee concluded that the “Forest Service is trying to withhold information from the Minister of Forests” (N.Z. Herald, 10 July 1974). The next day it was reported in the Herald that the chairman of the Kaimai National Park Promotional Council (G. L. Mackersy) considered the report “a very sketchy document of little value”. He felt that “the importance of the region has been lost sight of due to the potential short-term value in exotic plantings and the extraction of tawa for hardwood additives in the pulp industry” (N.Z. Herald, 12 July 1974). On the other hand, the Tauranga County Engineer, N. G. Hansen, was in favour of the proposals provided the Forest Service carries out the work (N.Z. Herald, 16 July 1974). Such conflicts of opinion are bound to arise, even though the exotic area proposed is only 10 200 hectares out of a total of 50 500 hectares. However, if one looks more closely at the region, it appears that much larger contiguous areas of forest, not under the aegis of the Forest Service, are likely to be leased and converted to exotic forest.

Basically, the problem is that a very large wood-using industry needs to acquire more land to keep up with its almost insatiable demand for pine wood. It is perhaps pertinent to look elsewhere, especially to the large unthrifty blocks of low-grade farm land between Lake Taupo and the West Taupo State Forests, which would be far better in trees than grass. Large-scale afforestation there would also alleviate the problem of eutrophication of Lake Taupo, which is already cause for concern, and should certainly be examined in detail.

The weakness of the system is that the organization wishing to promote development is also charged with considering its environmental implications. It is not a good principle to combine plaintiff and defendant. Environmental reports should be prepared by impartial persons, free from defensive attitudes on the grounds of vested interest, with marked judicial ability, if only to persuade the public that justice is being done. The organization wishing to promote a project would then present evidence along with all other interested persons and bodies. The problem is, of course, to find suitable people. Impartiality is becoming hard to find, even in those bastions of truth and objectivity—the scientific community and the universities
where environmental issues seem too often to be a matter of emotion rather than objective scientific evaluation.

One of the major difficulties in a democracy is to strike an acceptable balance between freedom and licence. As the number of cooks seeking to take part in baking the pie increase, so action is liable to become bogged down or deflected, and those responsible for action may fritter away their energies in frustration and indecision. Even before the preparation of the impact report, the Mangatotara proposals had been dealt with by the Officials Committee of the Environment, the Forestry Development Council, the Environmental Council, the Bay of Plenty Catchment Commission and the Hauraki Plains Catchment Board.

The Forest Service is evidently feeling the impact of the environmentalists. In the Annual Report of the Director-General of Forests for the year ended March 1974, just one modest paragraph is devoted to a matter which is surely cause for satisfaction—the highest-ever planting area of 41 300 hectares in one year. And yet this report contains seven pages on management of native forests, including Forest Parks, 1½ pages on animal control, and nearly 3½ pages on environmental forestry. It would seem that foresters are in retreat. In view of the long-term importance of production forestry to the well-being of New Zealand, this is not a satisfactory state of affairs.

Noxious Weeds

The report of the Committee of Inquiry on Noxious Weeds Administration almost escaped public comment when it was presented to Parliament in September 1973. Even so, it has some major implications for forestry, and should receive careful scrutiny by foresters. The Committee found (p. 25) that there had been "no substantial improvement in the noxious weed position during the currency of the Noxious Weeds Act 1950", and two of the principal recommendations are that the Crown should be bound by the Act (within reason) and that the "New Zealand Forest Service be asked to take responsibility for an increasing role in protective or productive afforestation for noxious weed control" (p. 9). All the same, under the heading "Principles of weed control" (p. 43) it is stated that "the most effective means of combating undesirable plants is by developing and maintaining conditions of fertility, management, and plant competition which prevent the establishment" of noxious weeds, and foresters are sadly aware of numerous cases where, because farmers have failed to follow this dictum, weed-infested land has been handed over for afforestation in order to overcome the problem.

In view of the findings it is interesting to observe how little forestry expertise was applied to the Committee's deliberations. Of the nine members, only three were non-farming in interests; two of these represented the Counties Association and one the DSIR, and could be said to have agricultural associations. The New Zealand Forest Service, one of the largest landowners in the country, and one on whom the find-
ings might be expected to bear heavily, was not a member. Of the 138 written submissions only one, from the Forest Service, had any major connection with forestry (pp. 58-60) and, when discussing research (pp. 36-38) neither the Forest Research Institute, nor the large forest owners (who have done a great deal of research in conjunction with agricultural chemicals companies) were mentioned. Also, surprisingly, the Agricultural Chemicals Board, which has a major role to play in this field, appear not to have been consulted.

The Report proposes a Noxious Plants Council (on which the Forest Service is to be represented); Regional Co-ordinating Committees based on regions defined by the Ministry of Agriculture and Fisheries; and District Noxious Plants Authorities. On the last two there will be no forestry representatives. But then (p. 44) the Committee lists a final principle: "To the limit possible, the approach to weed control should be advisory rather than regulatory." Costs must be borne by the owner or occupier of land, even where the infestation may be due to factors beyond his control.

The major problems are: that weed control is a highly technical field, and the average land-owner rarely acquires the expertise to deal with infestations efficiently and economically; to be effective, pressure must be exerted steadily over a long period, and fully throughout large geographical regions—a virtual impossibility with widely fluctuating farm incomes; costs can be prohibitive. The Committee seems to have recognized none of these critical factors, and its report has the stamp of well-meaning amateurism. Its conclusions are largely related to farm land, and the orbit of the Lands Department. There is no recognition that grasses are major forestry weeds while contortia pine is a desirable crop, or of the enormous cost of afforesting land where weeds have got out of control; it is surely not very constructive to infer that the Forest Service should be responsible for taking over country where the farming community has given up the struggle. It would be far better land use to plant such country with a productive tree crop before the farmers admit defeat.

This further attempt at coping with the New Zealand weed problem is one of a long line of such efforts (the first was the Wellington Provincial Council's Thistle Act of 1854) and on the face of it does not appear to offer a solution. Indeed, political solutions are unlikely to be effective in dealing with a technical/economic problem. There would appear to be good grounds for setting up a body of technical experts to look at the matter from the other end—that is, methods of eradicating weeds—before trying to build up a superstructure. It is strange that the proposed solution to the ills of society seems so often to be yet another administrative hierarchy with attendant advisory bodies, rather than effective concerted attack on the problem at the weed roots.