LAND USE CRITERIA FOR EXOTIC PRODUCTION FORESTRY — A FARMER'S VIEWPOINT

D. T. Spring*

I do not intend that my remarks should provide a detailed list of the criteria named in the title. I prefer to leave that to people with the appropriate legal or planning qualifications, whose competency to carry out such a task is far greater than mine. What I do want to do, however, is to express a point of view concerning factors which must be taken into account when considering the use of land for forestry production. The viewpoint expressed is that of a farmer, with all of the fears and concerns felt by farmers at the encroachment of forestry on to farming land.

To understand these fears, be they real or imagined, it must be realised that the whole history of New Zealand farming is one of development of land from varying types of natural or reverted cover, be it forest, scrub, tussock or swamp. After the clearing operation, establishment of pasture species is followed by initiation of the fertility cycle by the use of artificial fertilisers. The final step is stocking of the land. This history of land development for farming is both long-standing and recent.

Since for many years the basic objective of farmers has been to cut down trees and clear the land, it is not surprising that farmers look with suspicion and indeed disfavour on attempts to replace pasture and stock with trees, thus reversing a process which many have spent a lifetime carrying out.

There is also a little of the David and Goliath analogy. Farmers as individuals, with the resources of individuals, are required in some areas to compete for the prime resource of production (land) with the Goliath of forestry. Forestry companies are usually large, with corresponding resources. While they may not, in the longer term, be able to sustain higher land prices than farmers, experience to date does tend to indicate that they have been rather more than competitive price-wise. However, it has been their ability to close a deal quickly with ready cash which has provided a

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very real advantage over individual farmers in purchasing land.

I would like to mention the following points which I believe must be borne in mind when any change of land use from farming to forestry is being considered.

(1) *Productivity Factors*

Good farmland should be retained for that purpose and should not be afforested. Food production is and will continue to be an elementary land usage.

New Zealand's role as a food-producing country, in a world which has a rapidly enlarging food gap, should not lightly be set aside.

Food is a sensitive political commodity. While political influences will undoubtedly affect prices for foodstuffs, the same political influences can affect trade and thus prices of wood products also.

Because much of any increased forest production will be for export, and thus will not have the "cost making" security of the local market, the uncertainties and fluctuations currently experienced by farm products will also attend wood products.

The current economic crisis in pastoral farming is a crisis of costs, not a crisis of returns. Farming is still very profitable to New Zealand and to the processing industries. Only the farmer, as a price taker, misses out. For example, a 150 kg manufacturing cattle beast costs $63 to move from farm gate to c.i.f. From this the farmer receives, if supplementation from industry reserve funds is disregarded, only $7.

A definition of "good farmland" is dependent on the objectives of the definer; a figure of 10 stock units per hectare has been described in forestry circles as "marginal" farming land. I would point out that the average stocking rate for North Island hill country farms is between 8 stock units per hectare for hard hill country and 10.3 stock units per hectare for hill country. Approximately 7700 sheep farms in the North Island alone fall into the marginal category as defined by foresters, and almost one-third of all New Zealand sheep farmers work such units.

(2) *Social Factors*

The fear of depopulation of rural areas and the consequential loss of social services is very real as experienced by farmers. The loss of one or two families, as forestry moves into a valley, can reduce child/mile ratios for school bus runs quite markedly. This may necessitate parents delivering and
collecting children daily, either to or from the school or the end of the road. Rural mail delivery services could become less frequent, while school gradings could fall. The local store may be forced to close down, thus denying a useful service to the community.

It is no answer to contend that social services will be improved as forestry eventually employs more people. By that time there will be a different residential distribution pattern. Forestry tends to bring people together in more centralised communities than does the dispersed settlement pattern characteristic of farming.

(3) Effect on Processing

Care must be taken to minimise the effects on existing processing facilities of taking of land out of pastoral farming. Farmers (and others) have invested huge sums in processing facilities which, in many cases, would be valueless if they become redundant. With diminished throughput the cost effects of remaining overheads would fall upon remaining suppliers, thus effecting their returns and the profitability of their enterprise.

The balance of supply over a very large area can easily be disturbed and reduced below optimum by quite small stock movements. The Auckland province, for instance, is now experiencing considerable under-utilisation of freezing works facilities as a result of a drop in stock numbers in that region over the last year or two. Even the dairy industry has not been unaffected, as potential or existing dairy land in the southern Waikato has been afforested. The supplying shareholders in the dairy company with which I am associated have an investment in that company of around $20,000 per supplier. Obviously consideration must be given to ensuring full utilisation of existing processing facilities.

(4) Noxious Weeds

These appear to thrive in forested areas — particularly along the fringes of forests. While most forest managers try to maintain good weed control, farm management in the proximity of a forest may easily become more difficult and costly.

(5) Agricultural Pests

Deer, pig and opossum all live and thrive in bush and come out on to pastures. The opossum, in particular, appears to pose a major animal health threat. Considerable evidence is emerging which clearly shows that cross-infection of tuberculosis is occurring between this pest and cattle.
Export markets for livestock products require very high standards to be met, and expensive animal disease eradication programmes have and are being undertaken. The success achieved to date by tuberculosis eradication programmes is now being threatened by the opossum, a pest which will be difficult and costly to control. It is essential that we undertake the necessary control measures, and do not allow export markets to be jeopardised.

(6) Land Valuation Committee

Farmers are generally opposed to any interference with the right of an individual to dispose of his land to whom he likes. The seller of land is usually interested only in obtaining the highest possible price. As he intends to leave the area and frequently the industry, he is not overly concerned about problems I have mentioned which may be left behind when a change of land use to forestry takes place.

These problems and changes will be experienced only by those who remain behind, and those people at present have no practical or legal recourse to influence in any way the disposition of land in order that their interests may be considered. It may be necessary to give affected landowners in the district a right of objection, to the land valuation committee, where a change of use is involved. There would, of course, be obvious problems in defining who may object, and it also would be difficult to deny such a precedent when changes of land use other than from farming to forestry are involved.

When a change of land use from farming to forestry takes place, profound changes to the social and physical structure of farming and rural communities are initiated. In the case of large-scale afforestation programmes, these changes are major and probably irreversible. Economic repercussions on agriculture will be felt over a region very much larger than that directly involved.

Feasibility studies for afforestation programmes tend to be optimistic — diligent at pointing up the pluses (more jobs, $x$ dollars coming into the district, etc.) and much less enthusiastic at pin-pointing the minuses (number of families displaced, loss of food production, effect on processing facilities, etc.). Although I appreciate the difficulties in measuring and quantifying those factors which I believe need to be considered, this fact constitutes no reason to ignore them. All of the points which I have raised are important, and should be included in any schedule of criteria for land use for forestry production, both in a regional and a national context.
LAND USE CRITERIA FOR EXOTIC PRODUCTION FORESTRY — A FORESTER’S VIEWPOINT

J. E. Henry

Land for exotic forest expansion has to come from that which is at present in some other use. No matter what the present use is, there will be opposition from someone when it is proposed to change that use. Such opposition is usually sectarian and seldom considers all implications of the change.

The major types of land converted to exotic forest use are indigenous cutover, scrublands of various types, reverted farmlands, marginal farmlands and good farmlands. In certain circumstances all classes may be converted to exotic forest.

Good land use demands that soil and water values be protected, and land use must be changed when these values — over the long term — are threatened. For instance, on the East Coast, land with good farm production is being planted in trees for this reason. Conversely, some areas must stay in their present cover where this is adequate, and become neither farm nor exotic forest.

There are areas being farmed at present which produce less than it costs in overseas funds for that production. Consider, for instance, the cost in overseas funds of fertiliser manufacture, the transport of farm materials, and the cost of bringing land back into production after it has run down. Land should be planted in trees as soon as it is evident that farmers have lost the battle to hold it in agricultural production.

Social and economic considerations of a region must also be taken into account, and criteria will differ from region to region on these points.

There is a need for forest industries to form the basis of centres of populations away from the major cities. This is important if we do not want to see our country towns die, and all our educational and cultural facilities concentrated in a few cities. I see no hope of any of our smaller towns growing unless some major industry is associated with them. Smaller cities and towns have a very much lower community

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cost than a city like Auckland when the huge cost of supplying water, sewerage and transport facilities for the latter is taken into account. Consider the cost of motorways and the cost of transporting people to and from work in our larger cities. The energy requirements for this growth would go a long way to supplying the energy requirement of a large forest industry.

Transport costs are the bugbear of all our primary and secondary production. It is no use planting forests too far away from a centre of utilisation and losing too much of the value of the crop in transport costs. The decision of whether marginal farmland would be better in trees, or in grass, will be made on the cost of transporting logs to a point of utilisation. So, in some districts, marginal land within an economic haul of a mill will go into trees, while similar land elsewhere will stay as marginal farms.

In regions where there are large forest industries, and where such industries could be established, exotic forests should occupy greater areas of the categories of land that I have listed than in areas away from such centres. In setting aside reserves for any purpose this factor should be considered.

Regional and national planning is necessary to achieve a reasonable balance to cover aesthetic, scientific and conservation values. This balance is most difficult to obtain and those who are most vocal of what is achieved are those who live in cities, own no land, and have little regard for the social and economic effects of land use decisions on the people who live in the country or who own country land.

Forest owners and farmers are most generous in allowing other people to use their land and receive little acknowledgement for their generosity in this regard.

Conservation values are also difficult to define and mean different things to different people. I put high value on the retention of land in forest, and consider that exotic forest with the protection it provides to native flora and fauna, is good land use. The steps at present necessary to establish exotics are unavoidable but ephemeral. It is the long-term values that are important, and, after all, it took the Californians only a century to come to regard Eucalyptus as a native.

I believe that large areas of forest, whether native or exotic, but preferably both in contiguous areas, provide good protection for much of our native flora and fauna, and that they have the greatest potential of any land for recreation.

Criteria for the use of land for exotic forests are not simple nor are they the same for each region. Foresters, by virtue of
their professional training, have an obligation to put time as a factor in setting out these criteria. It is a factor conveniently ignored by most other parties — and too often by foresters themselves.

We therefore have soil and water values, transport costs and people as the main criteria for the use of land for exotic forests. The first two are relatively simple to assess and should be considered first because if these are unfavourable then there is no need to consider the more complex people factors. People constitute the most important criterion, and the economic and social effect on them of land use decisions must be considered at both the regional and national level.
The terms of reference of the Land Use Advisory Council are:

(1) To examine, develop and advise on the criteria on which sound decisions can be based for the use of land which is zoned rural under the Town and Country Planning Act 1953, or is in rural use.

(2) In preparing these criteria, to take into account physical, ecological, economic, social, environmental and other relevant factors.

(3) To examine means by which these factors may be more precisely evaluated.

(4) To provide guidelines for determining the optimum use of rural lands of the Crown and, on a consultative and indicative basis, the use of other rural land.

(5) To review these criteria and guidelines from time to time.

As New Zealand's economy and way of life are so largely dependent on the land resource and what comes from it, the Council is convinced that the use to which land is put and the methods for ensuring an equitable allocation of it to the various sector groups are matters of national concern. Because land-use decisions are in fact economic, social, and environmental decisions, the Council sees the wise use of the land as requiring the active interest and involvement of every sector of the community. The use to which land is put dictates the pace and shape of economic growth, the character and severity of social problems, and the extent to which the environment is preserved or destroyed.

This briefly gives a picture of the Council and its sphere of activity. As can be seen, the development of criteria for
use of land for exotic production forestry in a regional context falls within the Council's general terms of reference. It may be of interest to note that the Council feels that development of criteria for land use on a national basis is unrealistic at this stage; and that such development is best done, at least for the present, on a regional basis.

Twice last year, the Council was approached about acquisition of good quality farm land for afforestation purposes. These approaches served to confirm the Council's intention of looking at forestry development, the needs of this industry for land, and whether or not some form of control should be exercised over the acquisition of land by the major forestry firms. Work on this project is continuing, but it will probably be some time before the Council can present specific recommendations to Government. However, in the meantime, the Council has expressed the view that forestry expansion should be concentrated on undeveloped or under-developed land, on cut-over indigenous or other forest, or on land marginally suitable for farming. A check made on actual land holdings acquired in recent years by forestry interests indicates that, while these purchases have involved quite a large total area, the amount on a national basis is not yet of alarming proportion. It is true that in a number of cases economic farms have been acquired, but the Council does not think the purchase of farm land by forestry companies has yet reached the stage where direct intervention is justified. However, the trend in purchase does indicate an increase in this type of activity. The Council recognises that there must be early action to ensure that, while the forestry industry obtains the land it requires in locations suited to forestry development, there should be little or no conflict with agriculture, recreation, or other land uses which contribute to overall community needs.

This brings me to the panel subject, and in particular I would like to discuss the problems, as I see them, which exotic forestry can bring to other land users in the region. The Land Use Council accepts that exotic production forestry is a legitimate land use; in fact this point was never in contention. The discussion on the subject concentrated on the extent or otherwise to which prime agricultural land should, or should not, be made available for exotic forestry. The argument has been going on for some years now, and there has been and still is a substantial vocal opposition to the establishment of exotic forests on land traditionally looked on as a farming area.

The infrastructure of the New Zealand economy is built on primary products, and it is not an easy matter to change a
hundred years of traditional rural way of life in a few short years. I accept, and so do many other people concerned for New Zealand's economic future, that exotic forestry can produce, per acre, a high level of overseas funds. But a balance must be achieved and I believe that this also is accepted these days. I do not subscribe, however, to this balance being achieved on the basis of one, two or more regions being set aside exclusively for exotic forestry while others remain exclusively for farming. The balance must be achieved by multiple land use, and it does appear that the introduction of exotic forestry, or even expansion of an existing scheme in a region, can bring with it problems to the character and nature of the rural pursuits of that region.

This can, perhaps, best be illustrated by a hypothetical, but nonetheless real enough, situation of a region primarily involved in dairy farming. To support this regional economy may be one or two small towns and a few villages, each with its ancillary services of shops, garages, pubs and banks. There will be a church or churches, school or schools, possibly a small sub-office of a stock and station agency, and naturally somewhere in the region will be a dairy factory. It is the sort of agriculturally based rural scene we are all familiar with. The purchase of a number of farms for forestry production would place the rural farming economy in danger. The loss of production from farms planted in trees will most assuredly affect the dairy factory. Inevitably some staff will lose their jobs. The loss of patronage from the closure of farms and the movement of families out of the district make it difficult for the remaining services to maintain a viable existence, and as a result a small town or village may die. The farmers whose farms are unaffected by the scheme will thus find it necessary to travel greater distances for services and vice versa, and this in turn must affect farm costs.

A more subtle set of factors now comes into play. The company may have announced, after purchasing its initial areas of land, that it required no more. However, the remaining farmers may feel that their pursuit of a rural existence in its old traditional manner is sufficiently disturbed to warrant sale and repurchase elsewhere in what they think to be a more hospitable environment. At this point, because of a lack of confidence in the farming future of the area, the forestry company may be the only buyer. Farming as a business has now disappeared, along with the dairy factory, its staff, and some of the ancillary services of schools, churches, stock and station agency, the local garage, etc. The forestry development will bring with it different skills; and for eco-
nomic reasons the staff will probably be housed in a central location, such as in one of the towns near the development. That town will prosper, but irrevocably the character of the region has changed. Whether this is good or bad is a matter for individual judgement but it is not a situation that should be accepted without considerable thought.

I appreciate that, because there is no precedent, much of this is conjecture. However, the pace of forestry development is moving sufficiently fast to suggest that the problem is not far away, and I do not feel that the view outlined is too alarmist. I am sure many people must be thinking along these lines and wondering what the answers are. My answer is that wherever possible the pursuits of farming and forestry should go hand-in-hand on a regional basis, and that both uses along with others such as recreation should be viable and going concerns. This is what the Land Use Council is looking at — the multiple use of land within a region in a way that benefits all people who live there, and the nation as a whole.

In the context of the title of this address, one of the most important criteria is to determine a balance between competing land uses. At present there is no law prohibiting a private purchaser from buying large areas of farm land for forestry purposes. Contrasting this is the Land Settlement Promotion and Land Acquisition Act which provides for a specific reporting procedure to be followed and the possible decline of an application to purchase farm land where aggregation is concerned. It is my opinion, then, that as a first step development proposals involving the introduction of a new land use to a region, or the major expansion of an existing land use, become the subject of a land use study. The proposals and the report should be made available to the public for it to comment and put its case. I am aware that precisely this is being done in the King Country but I stress it because the need for public comment is to my mind most important. All too often the people most affected have been the ones not consulted. I doubt whether anyone nowadays really goes along with the old philosophy of development proposals that went ahead in secrecy and were presented as a fait accompli. It is not possible to operate in this manner any longer. People are concerned for their environment and this includes the right to object to development on the basis of aesthetics, dislocation, noise, pollution, etc.

Further, I am wary of strict land-use zoning in rural areas. Unless all the basic information is available I do not think we should state categorically that this region shall contain so many acres exotic forests, so many acres farm land, so many
acres reserve land, etc., and that each will be located here, here and here. It may be possible to do just that in some areas, but there has to be flexibility and I believe that decisions should be made after careful land-use investigations on a regional basis.

I know that this adds another step into a system which many people would consider to be already too onerous in terms of regulations and controls. Yet, I do not see that in today's complex society there is any alternative. Too often land use has been determined on the basis of expediency, tradition, short-term economic considerations, and other factors unrelated to the real concerns of a sound land-use policy. Too often, also, insufficient recognition has been given to the fact that intelligent land-use planning and management can provide the means both to enhance and to preserve the environment, and also permit development which will improve the nation's standard of living.

In conclusion, I do see problems with the expansion of exotic forests. My synopsis may not be agreed with altogether, but I imagine many would agree that substantial changes would follow if these forests take over some of our prime agriculture land. My concern is the effect of this on a particular region and on farming communities. As mentioned earlier the Land Use Council is endeavouring to come to grips with the problem, and I am sure it will help Government evolve a policy in this direction.
LAND USE CRITERIA FOR EXOTIC PRODUCTION FORESTRY — THE MAN IN THE STREET’S VIEWPOINT

I. L. BAUMGART*

Following the very encouraging and comprehensive examination of forest policies at the Forestry Development Conference — especially those sections dealing with afforestation and land use — it seems rather difficult to add much from the environmental point of view in a 15-minute lead in.

But although much has been said before, I think we must make really serious examination of some of the environmental implications of a rapidly increasing proportion of the land surface of New Zealand being planted in exotic trees.

For some reason there has been a complete turn-around of a large section of public reaction over the last few years — not the technical foresters, or the economists, or the agriculturists, but many of the “men in the street”. A few years ago the general reaction was — a wonderful job being done — a new industry emerging — a cover to bare soil — a green mantle to scrub-covered hills — a creative thing where previously there was wasteland. But now, just when exotic forests have been shown to be a major primary producer of materials sorely needed, when the management of the forests, the processing of the products, and the servicing industries associated have developed into a major sector of our national life, adding a further substantial leg to the base of our national economy, we find that same “man in the street” beginning to be critical, sometimes antagonistic, and sometimes even afraid of the very thing that he previously nurtured. Why?

I think that primarily it is because it is so big — so big that our man in the street feels that he cannot have any influence on how it will develop. He is by nature suspicious of big business — it makes him feel smaller and less powerful as an individual — and he has suddenly realised that exotic forestry and its processing, transport, and servicing is business done in big chunks by big impersonal organisations — and he fears what changes this big thing is going to make to his work, to his recreation, to the land he knows, to the way he lives,

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and to the way his children will live — in short, to his environment.

It has been interesting to watch the beech forest controversy from this point of view. Those who oppose the development of industries based on the beech forests generally advocate “leave things as they are!” For many that does not really imply “don’t use the beech forests”; it means “continue to use them in a scattered, inconspicuous and inefficient sort of way in small pieces which can be readily adjusted as we go along”. It means “let’s keep our options open so that if we don’t like it we can change our minds”. And that I think is what the man in the street is concerned about. Exotic forestry involves very extensive and apparently irreversible alteration of the surface of our land, of our way of life, and of our means of livelihood — and we do not know whether we will like any of it.

So I would like to look for a few minutes at aspects of the environment induced by extensive exotic forestry which concern people and suggest that these aspects should be taken seriously by those planning forestry development so that they can impart their confidence and enthusiasm to the man in the street, who is today, more than ever before, an important critic and judge of proposals; he is also better informed and more ready to question than ever before.

First, he still remembers those notices “FOREST — KEEP OUT”. Though policies have changed, and it is now recognised that good public relations do involve an element of politeness, the New Zealander has grown up with a tradition that our forests are there for us all to enjoy, and that closed forests mean a loss of freedom. I know and applaud the moves that are being made to make exotic forests more accessible to responsible people, but this image dies hard. Even the responsibility of the Forest Service for rural fire control can work somewhat against this — during the closed fire season it is the foresters who apply restrictions to the public’s actions even in areas outside the forests such as the “Queen’s chain” around the Marlborough Sounds — largely because of the exotic forests. Commonsense indicates that there are times when restrictions must be imposed — and the public will accept these in the same way that they accept agricultural quarantine procedures — provided they are continually informed and kept in the picture, and convinced of their necessity.

Perhaps the biggest real objection is the monotony of a large exotic tree farm — straight roads, miles of trees, and nothing else to see. Because forests are such a complete
blanket they have much less variety than farms where animals, hedges, buildings, and varying seasonal activities provide a constantly changing landscape. The forester is inclined to say a carpet of trees is as interesting as a carpet of grass — but it is not to the general public. More attention to planting for aesthetic variety — by margins of different species even if the forest itself must remain a monoculture (which I still doubt very much!); by well-designed roads and well-sited reserves, by interesting villages and tastefully shielded working areas — in many such ways the monotony of exotic forests can be changed into an interesting landscape. And since you are changing the landscape — you can go that second mile and make it interesting!

I am particularly pleased at Mr Conway's announcement that the first exotic state forest park will shortly be gazetted — the older part of the Whakarewawera State Forest. This will do a great deal to show people that an exotic forest has a beauty and a recreational value which is different from the indigenous forest, but very real. It will also show that the exotic forest, well managed, is not the sterile monoculture that most people imagine, but can in fact induce a lower storey of attractive native plants which would not have appeared if the forest had not created the suitable microclimate. And this will help to remove another fear — that the change to exotics is irreversible. I am always impressed that, in the central North Island, the pines are an excellent nurse crop for an indigenous forest that had been absent from the area since the last forest was destroyed 1800 years ago. People will be reassured that we are not necessarily losing our native plants or our native birds and other wild life. I hope that the new park will be the first of a series, placed strategically and designed and managed with great care, to show that in our exotic forests we have a new thing of beauty and of recreational value. Thousands of New Zealanders thrill to the beauty of the trails through the pine forest around Lake Louise in Canada without thinking that we could do it just as well here if we set out to.

Turning to actual forestry operations, there are two particular stages at which a forest imposes its biggest impact on people — when it is established and when it is harvested. At establishment the repositioning and regrouping of people who previously worked the land must be handled with great care and skill if the forest is not to begin at a public relations disadvantage. The type of programme envisaged over the next decade would I believe warrant the employment of specially
trained staff to develop the best ways of handling this delicate, but very important, human situation.

It is during the actual clearing and planting operations that the forester is at his most unpopular. If he burns he is accused of creating a desert; if he scarifies vertically down the slopes he appears to create a skeleton of the land which goes against all conventional soil conservation practices. The Rai Valley type of preparation, whatever its ultimate effectiveness, shocked many people, and is blamed rightly or wrongly for every bit of sediment that arrives in the Pelorus River. Both burning and stripping do appear as sacrilege to many people, and I suggest require very special explanation and justification to the involved public. Protection of strips along watercourses and of scenic and scientific reserves do not in themselves meet public concern; facts and figures clearly presented are necessary. The use of independent expertise from institutions such as Ecology Division and Soil Bureau in the preparation of this information would help in establishing its credibility.

At the harvesting stage I am hopeful that the operations of the new Logging Industry Research Association will lead to much tidier, less disturbing, and much more flexible operations. Noise, mud, dust, soil disturbance, plant destruction, the creation of a desolate surface of waste timber, and an element of danger to the people involved, are all likely to diminish as logging, transport, and utilisation methods improve. At the present stage the transport of logs on public roads, criticised both for holding up traffic by low speeds and for creating dangerous conditions by high speeds, but in any case creating noise, traffic volume, and road maintenance problems, is a major impact of the forestry industry on the community which is not welcome. Special roads and rail links, and some pre-processing in the forest may be required in future.

In the processing plant, noise and effluents into air and water are, of course, the principal environmental problems. The rapidly advancing technologies being developed in Sweden, U.S.A. and Canada are providing the means by which these problems can be minimised, and I am sure we must apply these advances to our conditions.

The one other area of concern is the effect of exotic forest on the hydrological cycle — and I know that we are all agreed that we do not know enough about this. All sorts of figures are being quoted, and the public is concerned that consistent answers cannot yet be provided. I know of the very extensive research programme now being undertaken, and that definitive results will take some time to produce. But this effort must
not be allowed to slacken off — it is too important an aspect of environmental management in which to move without a sound basis of knowledge.

These, then, are some of the main environmental issues which I consider are important in considering the role of exotic forestry in good land use. Some may think I have been talking about public relations — but there is a good deal of this in environmental management. After all "a good environment" is what we believe people really want to live in — and to find out what that is involves explaining what you want to do and asking them what they want to do. Hopefully there is not too big a gap between the two aims!