

Farrer Memorial Oration 1961 . . .

The Potential for Agricultural Settlement in the Northern Territory

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It is a great privilege to be invited to deliver this oration in memory of William James Farrer, the "Father of the Australian Wheat Industry". As an interested worker in the study of wheat I, together with my confreres throughout Australia, have always looked to Farrer as our model of a dedicated research scientist, a man who applied his considerable talents and ability not only in furthering scientific knowledge, but also in serving, unselfishly and without regard for reward, his fellow men, the practical wheat farmers of his day.

In applying science to agriculture in Australia, Farrer was a true pioneer to whom we agricultural scientists of today, whatever our field, must pay homage. But as the Rt. Hon. J. A. Lyons, P.C., M.P., then Prime Minister of Australia said in the first Farrer Oration in 1936, "Today Farrer's work still goes on; the track he blazed is still opening ahead. Just as he was a pioneer in his young days in surveying the back country and making land available for the settler, so today we are still forging ahead with improved varieties of wheat as well as other crops".

It is not inappropriate therefore in this commemoration of the work of Farrer, to take as the subject of this oration the prospects for present day pioneer development of agriculture in the Northern Territory. Just as Farrer devoted so much of his time and thought to the modification of the existing varieties of wheat to the climate of southern Australia, so the major problem facing the North is that of adapting plant species and methods of production to the new environment of the Northern Territory.

What then is this environment of the North, what are its difficulties and why is it that we are still in the pioneering stage in its agricultural development?

EARLY HISTORY

The history of agriculture in the North over the years has not been a happy one. Since development first began in the 1860's it has been a history of failures. Many attempts have been made by practical agriculturalists and others but no major industry other than the pastoral industry has persisted. As examples I quote the early settlement in 1861 of some 70,000 acres near Darwin for sugar and the efforts by the Chinese from 1884 onwards to grow rice on the sub-coastal plains of the Adelaide River.

The problem was not that plants could not be grown in the environs of Darwin. Maurice Holtze, the Government Botanist, and his son, in the years from 1879 to 1913 reported that "the following tropical plants can be looked on as a most perfect success—sugar, cotton, rice, maize, jute, tobacco, peanuts, sesame, indigo grass cloth and arrow-root".

The reasons for the failures appear to lie rather in economic factors, the lack of markets, poor demand, low prices and lack of transport. Inevitably producers were up against a cycle which it was almost impossible to break. A cycle of poor prices

because there was no market, no market because there were few people, few people because there was no industry, no industry because of the poor prices. And so the cycle went round and round.

We must remember too that there has been nothing like the gold rush of the 1850's to populate the North, nothing like the favourable export wool prices of the early 1800's to start a grazing industry. If the North is to be developed, it is quite evident that some major positive action must be taken to break this cycle.

This lack of development has been a matter of concern to both State and Commonwealth governments and a number of official enquiries have been initiated. Within recent years the Payne and Fletcher Report (1937) enquired into tenure, credit and transport conditions and brought to light many criticisms of current procedures. After the war, with the realisation of the strategic importance and economic potential of the North, the Commonwealth Government and the governments of Western Australia and Queensland set up the North Australia Development Committee. This body found there was a grave lack of factual information and requested C.S.I.R.O. to carry out a series of soil and vegetation surveys. Several experiment stations have now been set up to provide factual data about the North.

More recently still, the Minister for Territories, the Hon. Paul Hasluck, appointed a Committee in July, 1959, to look specifically at the prospects for agriculture in the Northern Territory. The members were Mr. C. R. Kelly, M.H.R. for Wakefield, South Australia; Dr. D. B. Williams of C.S.I.R.O., and myself.

The terms of reference were to review the present knowledge now available on agriculture in the North and to report on the prospects of promoting agricultural settlement on an economic basis. I stress this last proviso because this has been foremost in our minds. Not that we have felt bound to look at the prospects of agricultural settlement on the basis of present inadequate transport and facilities and existing markets. But rather the prospects that might be possible provided some initial assistance were given to the new settlers on the lines adopted by governments in southern Australia.

THE FARRER MEMORIAL MEDAL

Professor Forster was awarded the Farrer Memorial Medal for 1961.

The medal is awarded annually to commemorate the work of Australia's great wheat breeder, William James Farrer, and to mark distinguished service to agricultural science. The oration by the recipient is an important item on the programme of the congress of the New South Wales Agricultural Bureau at which the award is made.

Over the past 18 months, we have had the privilege of looking closely at conditions in the North and of discussing its problems with many people. We have had the most willing co-operation of all concerned, including the Northern Territory Administration, Commonwealth and State government officers, local farmers and citizens.

PRESENT RESOURCES

What is the state of the present resources of the Northern Territory?

May I present a few facts. The population of the Territory is limited, comprising some 20,000 whites and over 16,000 full blood aborigines with approximately 2,500 part aborigines. The two main centres are Darwin with 10,000 inhabitants and Alice Springs with 3,000.

The climate is difficult. Temperatures are high and the humidity enervating. Average temperature at Darwin is 82 degrees compared with 64 degrees in Sydney. Rainfall at Darwin is high, 60 inches per annum compared with Sydney 45 inches. Most of this falls in the November-April period so that the season is sharply divided into a "wet" and a "dry". Evaporation is enormous by southern standards, 90 inches at Darwin rising to 116 inches at Alice Springs. During the "wet", movement is virtually limited to the few sealed highways.

The Northern Territory comprises more than one-sixth of the Australian continent, ranging 1,000 miles from north to south and 600 miles from east to west. It lies mostly within the torrid zone and comprises four regions—Darwin and the Gulf (usually known as the "Top End"), Alice Springs, the Barkly Tableland and the Victoria River districts.



Professor Forster delivering the 1961 Farrer Memorial Oration at Hawkesbury Agricultural College during the annual congress of the Agricultural Bureau of New South Wales.

Darwin and the Gulf region offers the best prospects for agriculture with a rainfall of 60 inches on the coast to 35 inches around Katherine. On the sea frontage the flooded coastal plains extend for some 40 to 60 miles inland with alluvial flats bordering a number of rivers emptying into the Timor Sea. The area of these sub-coastal plains suitable for cultivation has been estimated at 500,000 acres. Large portions of the rest of the district, however, are rocky with poor soils and likely to be almost useless for agriculture. Towards the southern portion of the region, there are considerable areas of mixed soil types (derived from limestone) in the Tipperary and allied land systems near Katherine, some of which are suitable for agriculture.

The famous **Barkly Tableland** region is important for its Mitchell grass plains and for the cattle stations established on it. However, the rainfall of 15 inches to 20 inches, much of which is lost by evaporation, is such that agricultural settlement would be difficult to maintain and the development of this region in the future must undoubtedly lie in improvements of fencing and watering of cattle stations and better management of the native pastures.

The Victoria River region in the west has not been thoroughly surveyed yet, but it has many areas of alluvial and flooded plains which provide excellent pastures for cattle production. However, much of the area is covered by rocky outcrops.

The Inland Plateau rises to some 2,000 feet with a series of ranges in the centre of the continent—The Macdonnel, Krichauff, Ferguson and Hart ranges. The highest of these reaches 4,900 feet, but as a whole they have little effect in inducing rainfall which totals only 5 to 10 inches per annum. Much of the inland is covered by sparse spinifex with very low carrying capacity of less than 3-4 beasts to the square mile. Appreciable areas are covered by shrubs such as Mulga and Gidgee and provide good top feed for cattle.

Around Alice Springs, underground water is sufficient to permit limited irrigation and production of fruit and vegetables is practised.

PRESENT INDUSTRIES

The Pastoral Industry

Cattle production is the present main industry of the North.

Although the terms of reference of our Committee did not include a review of the pastoral industry, we were naturally most interested in the possibility of improving pastures for this existing industry.

Its history has been a chequered one. As far back as 1820, the military outposts at Darwin imported buffaloes and native cattle from the Dutch East Indies. The main development occurred from 1880 onwards when the Duracks and other pastoralists from Queensland migrated westwards. Present numbers of cattle in Northern

Territory amount to some 1,200,000 with some 330,000 in the Victoria River district, 313,000 in the Barkly, 300,000 in the Alice and 200,000 in the Top End. The cattle industry has, since those early days, been based primarily on production of store cattle which are marketed on the east coast or moved south to Adelaide. Some export of live cattle from Darwin has taken place to the Philippines and Hong Kong, but this trade has been rather spasmodic and never very large. The number exported last year amounted to some 8,000.

Until the recent rise in prices for beef, the cattle industry has not been in a very prosperous condition. Most of the natural pastures are low in carrying capacity, varying from below five beasts per square mile in the desert community, to fifteen or more beasts per square mile in the better country. Insufficient fencing and small number of watering points are a serious handicap to good management, and turn-off of marketable cattle ranges from 7 per cent in the Victoria River district to 15 and 16 per cent in the Barkly and Alice Springs areas. The recent better prices for beef have changed the position materially and many of the stations are now improving their properties.

Peanut Production

Peanuts have been grown for many years to a very limited degree by private farmers in the Territory. For instance, in 1958-59, 325 acres were harvested by some 12 farmers with an average yield of 1,300 lb. per acre. These were located chiefly on the levee soils of the Katherine and Daly rivers. There can be no doubt that peanuts as a crop are suited to the Katherine environment. Recent research and experimental trials at the C.S.I.R.O. station at Katherine have amply demonstrated that peanuts can also be grown successfully on the broader areas of the dry country near Katherine as well as on the levee soils.

As an industry, peanut growing has not been an unqualified success. The only outlet for the nuts is on the edible market at Sydney or Perth at a price of 1s. to 1s. 6d. per lb. nuts in shell. On the eastern market, the growers have had to compete with the extensive highly organised peanut growers at Kingaroy in Queensland and freight and shipping charges have been a serious handicap to the Katherine growers. It is evident that the Katherine growers can only hope to compete if they can lower costs by large-

scale production but few of them are equipped to do this at present. Furthermore, since the Kingaroy growers are already producing more than enough to meet the Australian demand for edible nuts, any expansion of peanut production at Katherine would have to depend on an overseas market at the lower prices current on world markets. Such prices are based largely on the price of nuts for use in oil production at a figure as low as 4d. or 5d. per lb. nuts in shell.

The Rice Industry

Although the early Chinese recognised that the flooded sub-coastal plains of the North were suited to rice production, no serious attempts to establish an industry were made until after World War II. Extensive surveys were undertaken at that time with the support of the Commonwealth Government. Mr. Poggendorff, Chief of the Division of Plant Industry of the New South Wales Department of Agriculture, played a leading part in defining the most suitable areas for rice production.

In 1954 a company, Territory Rice Limited, with both United States and Australian capital, commenced investigations in the Humpty Doo region on the Adelaide River near Darwin. The Commonwealth government agreed to make available to the company within the five year period from 1956 to 1961 an area of 750,000 acres on the sub-coastal plains for development and subsequent sale to settlers for rice production.

After an all too brief period of exploratory work, the company commenced large-scale operations in 1958 in developing and sowing an initial 5,000 acre block. Only 2,780 acres, however, were harvested for a yield of 1,250 tons of paddy rice. The area was resown in 1959 from which some 3,500 tons were harvested, much of which, however, was of low quality and was sold overseas at reduced prices. By the end of the 1959-60 season, the company had run into serious financial difficulties and after some reorganisation an interim agreement was arrived at whereby an area of 2,000 acres of the better class land was resown in 1960 by a group of four share farmers. The future basis of operation of the venture is still under discussion by the interested parties and the Commonwealth Government.

Although some of the many problems have been overcome, many difficulties still remain to be solved.

The uncertainty of the initial rains necessitates seeding of the rice in a dry seed bed since the only water supply that could be used to supplement the early rains is that from the Adelaide River. This is too salty for use as irrigation water at that time of the year. Dry seeding frequently results in uneven stands with lowered yields at harvest.

Although much has been done to select varieties of rice suited to the Darwin environment by introducing strains from overseas and by hybridization, a great deal still remains to be done before we have varieties adapted to give maximum yields under the special climatic conditions of the area.

Harvesting also presents difficulties. For best quality grain with a maximum percentage of uncracked kernels, harvesting of the crop must be completed within a relatively short period after maturity of the crop and the paddy must then be artificially dried.

This raised one of the major difficulties experienced by Territory Rice Limited. The environment at Darwin is not an easy one. The season is short and rainfall variable, particularly at the beginning and end of the season. The organisation of the mechanical operations of cropping would be difficult enough in a community well serviced and with ample labour. The attempt by Territory Rice Limited to use large-scale extensive methods in growing an area of 5,000 acres using hired plant under contract for the operations of seeding and harvesting has resulted in many cases in unavoidably faulty agricultural practice. Yields suffered accordingly and under their management did not exceed 15 cwt. of paddy per acre. These yields compare most unfavourably with the average yield of 45 cwt. per acre in the Murrumbidgee area in New South Wales.

Other Agricultural Industries

The supply of fresh vegetables and fruit for the residents of Darwin and Alice Springs is of special importance in this tropical environment. Alice Springs is well served by some 30 local producers located in the Todd River Basin where limited underground water supplies are available for irrigation.

Supplies for Darwin, however, are not so easily produced. The climate in the "dry" is well suited for growing southern type vegetables. Some 140 acres are cultivated

for this purpose in the environs of Darwin and on the levee banks of the Katherine and Daly rivers, where supplementary water is available for irrigation. In the humid "wet", however, disease is a major problem in vegetable production and supplies have to be brought in from Alice Springs and Adelaide with accompanying high freight charges. Darwin growers, therefore, have difficulty in maintaining continuity of supplies and the industry is not on a sound permanent basis.

POTENTIAL

It is readily apparent then that any intensive agriculture must look to the Darwin-Gulf region—the Top End—for its future development. May we look first at one or two difficulties.

Land Clearing

An important factor in the successful establishment of agriculture in the Northern Territory is the initial cost of land preparation. Although the original price of the land is negligible, clearing, fencing and watering, under conditions prevailing in the North, are quite costly. The natural timber, except right on the coast, is not heavy and is fairly open. Although normal clearing in the past has been by bulldozer, there appears to be no reason why introduction of large scale clearing by chain as developed in southern Australia should not reduce costs considerably. The fallen timber, however, does not burn readily and extra raking and windrowing may be necessary. Suckering is also a more serious problem than in the south. Experiments are needed, therefore, to define the best methods of clearing and trials have already been initiated.

Costs have been assessed by the Committee on the basis of work already carried out. Our figures indicate that the initial clearing, burning and ploughing would cost £9-£10 per acre. Such preparation would be adequate for pasture establishment. However, for intensive cropping with peanuts, additional clearing of stumps and sticks would bring the total cost of preparation to between £14 and £15 per acre. It is important to recognize, then, that agricultural settlement will involve large capital costs.

Transport, Fertilizer and other Costs

Considerable stress must be laid on the many servicing difficulties handicapping the settlers in the North. All goods must be brought long distances by road, sea or air,

adding considerably to their initial cost. The port of Darwin is not equipped for bulk handling and charges for unloading and transshipment are heavy. As one example, superphosphate, which is just as essential for the North as it is for southern Australia, costs £24 15s. per ton landed at Darwin compared with £12 13s. per ton in the south. The Committee was impressed with the possibilities of Christmas Island rock phosphate dust as an alternative. Even this would cost £16 per ton in 1,000 ton lots plus wharfage charges of £2 per ton, to land at Darwin.

Here once again we come to the vicious circle of high prices because of low demand, low demand because no agricultural industry exists at present. The Committee recommended strongly that if agriculture was to be established in the North, consideration should be given to subsidizing, in the initial stages, freight and handling charges on important items such as superphosphate.

Coming now to potential settlement projects the Committee considered the following:

Irrigation

Despite the high rainfall of the Top End, supplementary water for irrigation would be of value in overcoming occasional dry periods during the growing season and in extending the length of the season at both the beginning and the end. Surveys conducted by the Water Use Branch of the Northern Territory Administration give little hope of the development of any large-scale storage of river waters for irrigation. However, there are considerable bodies of underground water in limited areas of the Top End which justify development.

In the Alice Springs area, appreciable bodies of shallow underground water conserved in the sandy alluvial deposits of river beds are known to occur in addition to the present storages in the Todd River Basin. These will warrant further investigation and development.

However, it is clear that on the basis of present information, we cannot look to any large-scale conservation of water for use in irrigation as a basis for settlement of the Northern Territory.

Sown Pastures for Cattle Fattening

The Committee was impressed with the possibility of improving the natural pastures in the higher rainfall areas of the Top End

and the use of these for fattening cattle for local consumption and export overseas. The existing cattle industry has been well established for many years and is well adapted for producing good store cattle cheaply. Without any export works at Darwin, the normal method of marketing has been to transport the stock to Queensland for fattening and killing on the coast. There is now a reasonable prospect of a large meat firm establishing a new local abattoir at Darwin and if a sufficient number of suitable fat cattle were forthcoming it would not be asking a great deal for the works to be enlarged to undertake export killing as well.

Experimental work by C.S.I.R.O. and the Northern Territory Administration confirmed by the experience of local graziers has shown that a legume Townsville Lucerne (*Stylosanthes sunandaica*) supplemented in some cases by buffel grass (*Cenchrus ciliaris*) can be established satisfactorily in the Top End. These improved pastures, and particularly the introduction of the legume, which is spreading naturally in many areas, will supply a valuable protein supplement to the poor quality native grasses. Although natural pastures are reasonable feed in the early part of the wet season, they are extremely low in protein at maturity (3 per cent) and are very poor feed in the "dry" (1-2 per cent protein). Carrying capacity has to be reduced materially under these conditions and cattle regularly lose weight ($\frac{1}{2}$ to $1\frac{1}{2}$ lb. per day) in the "dry".

Experiments have shown that the grazing of cattle on native pastures supplemented by sown pastures during the latter part of the "wet" and during the "dry" is practical. This improves their weight gains so much that they are ready for marketing in a much shorter period than the normal four to six years customary in the North.

The mechanical procedure of clearing and sowing down these improved pastures still needs much investigation, but the costs run out at about £14 per acre. The Committee attempted an overall assessment of the economics of cattle fattening under these conditions. Assuming that store cattle could be bought at 6d. per lb.; that a market for improved fat cattle was available at 7d. per lb.; and that the beasts put on 270 lb. of weight over the 12 months, our cattle fattener would possibly break even after allowing for costs, interest on capital and an owner-operator's allowance of £2,000 per

annum. The proposition is therefore attractive when one considers the likelihood of receiving more than 7d. per lb. for better quality cattle (prices at Wyndham and Townsville are normally better than 7d.) and the prospects for increasing the annual weight gain above 270 lb.

Rice

The establishment of a rice industry on the sub-coastal plains of the Northern Territory presents many interesting features. The initial attempt by Territory Rice Limited has provided much valuable information upon which we believe a more successful rice industry can be based.

The problem of dry seeding will still remain as a major hazard since there appears to be little prospect of supplies of irrigation water at seeding. Recent experiments by C.S.I.R.O., however, have been conducted with the seeding of rice in a wet seed bed—"puddling" as it is called overseas. This may well provide a means of re-seeding the "failed" areas from the earlier dry seeding.

Avoidance of "sun cracking" of grain at maturity by spreading the period of harvesting is important. This involves growing the rice in smaller unit acreages, artificial drying and the breeding of rice varieties combining high yield and variable time of maturity, a challenge which Farrer himself would have welcomed.

But the most important factor underlying successful establishment of a rice industry must lie in increased yields per acre. The average harvest of 10-15 cwt. of paddy per acre can never be an economic proposition. When we remember that the average yield of the Murrumbidgee Irrigation Areas is 45 cwt. and more of paddy per acre it is not asking too much to expect that the yield at Humpty Doo can be increased.

The Committee prepared budgets for rice farms of 250 and 500 acres respectively. Based on world export prices of fair quality grain giving a return at Darwin of £25 per ton paddy, we would expect that a grower would be able to pay costs of production, interest on capital and owner-operator's allowance of £2,000 per annum provided that yields of approximately 20 cwt. per acre of paddy were obtained on the 500-acre farm and about 23 cwt. per acre on the 250-acre farm.

Since yield per acre is so vital, the Committee strongly recommended that if

rice production was to be established it should be grown on individual farm units of these acreages rather than on large-scale extensive farms of the type established by Territory Rice Limited.

Peanuts

Much thought and research have been directed to the growing of peanuts in the better soil regions of the Top End. There is no doubt that climatic conditions are suitable to the growing of peanuts at Katherine, and C.S.I.R.O. surveys have shown that there are considerable areas in the Tipperary Land System around Katherine that would be suitable for large-scale production of peanuts on a dry land basis.

However, at this stage, insufficient information has been obtained on the exact location and extent of these suitable soils and on the mechanics of large-scale peanut cultivation and production on the farm. This is now being obtained by further surveys in the Tipperary Land System and by large area field production on the Northern Territory Administration Experiment Farm.

Furthermore, considerable uncertainty exists as to the potential market for any new large-scale production unit. Since the market for edible nuts in Australia is oversupplied now, our Committee looked at the possibility of crushing peanuts for oil and exporting this on the world market. The residual peanut meal from such a process would find a ready market as a concentrate in any cattle fattening projects.

Once again hypothetical budgets were prepared for typical farms growing 200 acres of peanuts. Allowing for a rotation of two years of peanuts and one year of some alternative fodder crop, we concluded that our farmer would be able to produce nuts (after paying costs, interest and an owner-operator's allowance of £2,000 per annum) at a cost of about 6d. per lb. provided average yields of 1,200 lb. nuts in shell per acre were obtained. If we compare this yield with the average production at Kingaroy (about 900-1,000 lb. per acre) and we contrast the price of 6d. per lb. at Katherine with the overseas price of between 4d. and 5d. per lb. for nuts used for oil production, it is evident that our producer at Katherine will have some difficulty in establishing himself unless he can get special sidelines to help him.

ORGANIZATION OF AGRICULTURAL SETTLEMENT

Finance

In the Committee's opinion economic development of agriculture in the Northern Territory should only be attempted on mechanized individually-owned farms. We suggested: for cattle fattening, areas of 18,000 to 20,000 acres of native pasture with 2,000 acres of improved sown pasture; for rice, farms growing from 250 to 500 acres of rice each year; for peanuts, farms growing 200 acres each year.

I mention these figures to illustrate the fact that small-scale farm settlement is not envisaged, and that the capital needed for each individual farm is of the order of from £20,000 to £50,000. It is obvious then that large organizations, whether government or private, must be necessary to sponsor settlement and undertake initial development. We felt that the ultimate ownership of the individual blocks should pass to one man or two man owner-operators, but the initial clearing and development could best be undertaken on a large scale.

Pilot Farms

Because of the large investment necessary and the lack of initial experience of farming in these new areas, the Committee recommended that in the first case the Government should set up pilot farms as test areas. Experimental farms and research stations can do much to determine the best agricultural practices, but the final determination of the best economic farm system and the true cost of production can only be obtained by actually running a farm.

The pilot farms, therefore, would be run by individuals who would be allotted to a farm unit which had been initially developed by the Government. The individual would be paid a wage during the test period and would be required to run the farm on general broad lines laid down by a settlement authority, *but* he would not be directed as to how to do it. He would, in addition, be given an incentive in the form of guaranteed prices for his agricultural products, these prices being based on a price which is thought to be attainable in the future. Finally, if the test is satisfactory and settlement proves possible, the pilot farmer should be entitled to compensation in acquiring his block at a reasonable figure.

At the present stage, the Committee recommended that pilot farms should be initiated by the Government in sowing

improved pastures for cattle fattening and in rice production. When more information is available other types of pilot farms could be initiated.

CONCLUSIONS

This very brief account of our survey of the potential for agricultural settlement in the Northern Territory presents some of the many problems that must be overcome before success can be assured. We concluded that there were good possibilities for agriculture in the North, but, and this is a most important "but", agricultural settlement cannot hope to be economic if it has to face the present difficulties of lack of transport and markets, difficulties of high costs in handling, high wharfage handling charges, high fertilizer costs. If the North is to be developed, it will be paramount that someone or some body must be prepared to make available capital in large slabs, so that initial clearing and development can be undertaken on a large scale.

Summarizing the findings of the Committee, we can say that on the basis of our assumptions, the best prospects for immediate settlement lie in—

- (1) introducing improved sown pastures associated with cattle fattening, provided an export market from Darwin can be established;
- (2) the growing of rice on moderately large individual holdings on the sub-coastal plains.

To provide further information on costs and farm scale production methods the Committee recommended that pilot farms be established for each of these types of settlement before the final decision on large-scale settlement is made.

In closing may I stress that we cannot afford another failure in the Northern Territory. Australia has many other things on her plate in the way of potential areas for agricultural development in more favoured climatic zones.

The final decision must rest with the Commonwealth Government. A successful agricultural settlement is not likely to just happen in Northern Australia. It will demand careful planning and the concentrated efforts of scientists with ability and foresight comparable with Farrer's. But surely the challenge is one we as Australians should take up, a challenge not for the Government only, but one for the nation. ●

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