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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA.

SECOND PROGRESS REPORT

FROM THE

JOINT COMMITTEE ON RURAL INDUSTRIES.

(FLAX PRODUCTION.)

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MEMBERS OF THE COMMONWEALTH PARLIAMENTARY JOINT COMMITTEE ON RURAL INDUSTRIES.

(*Appointed 3rd July*, 1941.)

The Honorable JOSIAH FRANCIS, M.P., Chairman.

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	ALEXANDER WILSON, Esquire, M.P.

* Discharged from attendance 12th November, 1941.
† Appointed 12th November, 1941.

JOINT COMMITTEE ON RURAL INDUSTRIES.

SECOND PROGRESS REPORT.

The Joint Committee on Rural Industries appointed to inquire into the effects of the war on the marketing of Australian primary produce, and on the economic condition of the Australian rural industries has the honour to present the following Progress Report.

INTRODUCTORY.

1. In view of the importance of adequate supplies of flax being produced for Australian and British war requirements and the prospects of the permanent establishment of flax production as an Australian post-war rural industry, the Joint Committee on Rural Industries has, along with other matters been conducting an investigation into the flax industry. Evidence has been taken in New South Wales, Victoria, Tasmania and Queensland, and mills and flax-growing areas in Victoria and Tasmania have been inspected, but time has not yet permitted the Committee to visit South Australia and Western Australia where areas of flax have recently been sown and mills established for its treatment.

2. Attempts to establish the flax-growing industry in Australia have been made over the past 40 years and for many of those years production has been assisted by bounties or guarantees of a fixed price. Nevertheless the industry has not expanded or achieved any great success. Contributory factors in retarding progress have been insufficient capital, a lack of expert knowledge and information with regard to growing flax and extracting the fibre, the absence of suitable varieties of flax capable of yielding a high percentage of good quality fibre, attempts to grow a dual purpose variety for both seed and fibre, inexperience in up-to-date production methods and general inefficiency in organization.

3. The Tariff Board has made numerous inquiries into the flax industry and its associated problems, and the following extract from its report, dated 26th June, 1939, on the question of the rates of duty which should be imposed on flax, hemp and jute yarns imported into the Commonwealth, is of particular interest :—

The Board considers it desirable, in view of past circumstances, to record some observations on the flax-growing industry in Australia.

This subject was reviewed by the Board in 1923, and again in 1935, when it dealt with the question of bounties on flax and linseed. In its report dated 19th February, 1935, the Board drew attention to the fact that, despite the assistance granted to flax growers by way of bounty or price guarantee over a period of twenty years, the industry had languished. As conditions then existing offered little prospect of successful development, the Board recommended the discontinuance of bounty payments.

Recently there has been a revival of interest in the industry due to changes which, in the light of previous events, may be regarded as revolutionary. The chief factors are—

(1) The World Market.

Exports of flax from the Union of Soviet Socialist Republics declined from 90,000 tons in 1934 to 34,000 tons in 1937 (Industrial Fibres—Imperial Economic Committee, 1938). It has been estimated that exports during 1938 were reduced to approximately 25,000 tons, and according to latest advices no exports of quality fibre are expected to be made this year. The retention by the Soviet Union of the great bulk of its production for domestic consumption is having a significant effect on the world market, and consequently there now appears to be a substantial export trade available to the Australian industry.

(2) Improved Types of Seed.

The scientific breeding of pedigreed seed has resulted in a greater yield of straw per acre, and a much higher yield of fibre per unit of straw. There is also less loss occasioned by disease.

(3) Improved Methods of Processing.

Water retting at controlled temperatures has superseded the unsatisfactory dew retting process formerly employed, and the development of specialized scutching machinery has resulted in much better treatment of the fibre at greatly reduced cost.

(4) Expansion of the Local Market.

The fact that the processing company—Flax Fibres Pty. Ltd.—is controlled by two companies which are spinners and manufacturers assures the absorption of such flax as is necessary for the operations of those companies and probably of other manufacturers interested in the production of flax products.

Another important aspect is the necessity for national stocktaking occasioned by the disturbed conditiong overseas in order that the Commonwealth, in case of emergency, may provide substitutes for raw materials now beins imported.

In commenting upon the improved outlook for the flax industry in Australia, the companies associated with the project fully acknowledge the valuable contributions made by the Victorian Department of Agriculture in regard to cultural practices and by the Council for Scientific and Industrial Research with reference to milling.

It is clear, therefore, that present conditions are more favorable to the successful establishment of the Australian flax industry than they have been at any other period of its history.

4. Shortly after the outbreak of war it was realized that Australian produced flax was likely to be of some importance in supplying British spinners. Examination of the position of the flax fibre industry in the Empire revealed a serious shortage in supply which was likely to be accentuated owing to the demand in the United Kingdom brought about by the use of flax for war purposes.

Flax fibre is an important raw material in the manufacture of many articles of equipment for the fighting services. Linen thread for sewing military boots and clothing, parachute harness, web equipment, canvas, cordage, fire hose and various kinds of linen materials are some of the things made from flax fibre and in everyday demand under war conditions.

In peace time the United Kingdom imported 70,000 tons of flax fibre per annum, principally from Russia and the Baltic States, Belgium and Holland. Only 8,000 tons, or just over 11 per cent. of her requirements, were produced in the British Empire, but Empire production was less than 1 per cent. of world production.

EXPLANATORY.

5. Flax is grown commercially for the production of linseed oil and fibre ; some varieties are best adapted for the production of fibre and others for oil. The linen flax plant (*Linum usitatissimum*), of the variety used for fibre, consists of a single slender stem, growing to a height of about 3 feet, without branching. The stalk is tough and sturdy and it is almost impossible to break it with a steady pull, a characteristic due to the bundles of fibre being arranged concentrically round the core, extending for nearly the whole length of the stem, and constituting when separated from the straw and suitably treated, the flax of commerce. The fibre flax has been developed by careful selection to yield a high percentage of straight sturdy fibre. Linseed flax is a shorter branching plant, bearing a maximum quantity of the linseed used in oil making, cattle feed and other purposes.

In Australia flax is grown in much the same way as a cereal crop and it is harvested with reaper and binder. The straw after drying in the stook is carted to the flax mill for processing. The processing of the straw involves three stages—(1) deseeding of the sheaved straw ; (2) retting of the deseeded straw ; (3) scutching of the dried retted straw. Deseeding is the removal of the seed from the bolls or seed heads of the flax, and the chaff is then winnowed from the seed. Retting is the name given to the process for the liberation of the fibre from the stem of the plant. It is a process of fermentation in which the adhesive substances which bind the fibres to the stem are decomposed and in which the stem itself is sufficiently rotted that in the subsequent operation of scutching, it will break and freely separate from the fibres. It is important to realize that the same factors which act on the coating of the fibres can also attack the fibres themselves, but more slowly, and consequently unless the process is stopped at the correct time, the fibres will be affected and become brittle and lower in value or even rendered useless.

Until comparatively recently all flax straw in Australia has been processed by dew-retting methods. This involves spreading the deseeded flax straw out in layers in grass paddocks in the autumn, and allowing the straw to remain exposed to the action of dew and moisture for some weeks until the retting process has been completed. This process of retting involves much labour in carting, spreading, and turning the material in the field, and finally binding it in sheaves for drying and carting back to the mill for scutching. As the retting process is entirely dependent on weather conditions, which vary widely during the season, it is practically impossible to secure a constant and uniform quality of processed fibre, and the proportion of tow to fibre is unduly high. Nevertheless more than 90 per cent. of the world's supply of flax is treated by dew-retting and this is the method being adopted for the treatment of the bulk of the crop now being grown in Australia.

Water-retting may be carried out in rivers and dams, or in tanks. In Australia tanks for water-retting have been installed at some mills.

Water-retting is carried out by immersing the deseeded straw in the sheaf in large concrete tanks filled with warm water, the temperature of which is controlled within narrow limits. This process of retting takes only a few days.

Chemical retting is a process wherein the flax straw is treated with various chemicals and is retted within a few hours ; but as yet this process is only in the experimental stages.

After retting, the straw is dried and scutched.

Scutching is the process of removing the woody portion of the straw from the fibre. The straw after spreading and butting at the hands of four or five operatives, is passed between fluted rollers to break up the woody portion and the broken straws beaten or scutched to remove the wood and any tissue still surrounding the fibre. From the scutcher comes clean fibre in parallel strands known as scutched line fibre ; other products from the scutching plate are tow and shive. Tow consists of the short and tangled fibre broken off during scutching. It has a much lower value than line fibre and is used for the manufacture of lower grade threads and fabrics. Shives are the short pieces of wood beaten out with the tow and separated from the latter on a tow shaker.

Another method, used in the production of a marketable fibre known as green or natural flax, is by a process of dry decortication. In this process, retting is dispensed with and, after being de-seeded, the natural straw is fed through breaking rollers to the scutcher. Flax produced in this manner has adhering to it much extraneous matter, normally lost by retting, which has to be removed during a subsequent process. Increased attention is now being given to this method of treatment, but it is still in the experimental stage.

The quality of the fibre and the proportion of tow to line fibre may be influenced at every stage by conditions attending growing, stacking, retting and scutching. Careful handling at every stage of processing, together with skilful judgment and close attention to detail, is essential if a high grade fibre is to be produced.

PRE-WAR PRODUCTION.

6. In 1936, a company known as Flax Fibres Pty. Ltd., was formed to make another attempt to establish the industry and played a prominent part in the development of the flax industry in Victoria. Flax Fibres Pty. Ltd., in which James Miller and Co. Pty. Ltd. and George Kinnear & Sons Pty. Ltd., flax spinners and cordage manufacturers of Melbourne, hold equal shares and have three directors each, was originally formed as the result of great difficulty experienced by these companies in obtaining essential raw material during the Italo-Abyssinian war. Being deprived of Italian hemp at that time, the companies found it necessary to use flax. As flax was then difficult to obtain it was determined to make every effort to build up the flax industry in Australia with the object of protecting the manufacturing companies against a shortage of raw material supplies. Within recent years, three directors of the company travelled abroad investigating all matters appertaining to flax production. The company purchased mills at Drouin and Colac and erected a mill at Strathkellar. It encouraged the growing of flax from high grade pedigreed seed, Liral Crown, which, imported at a cost of £90 per ton, was sold to the farmers at £40 per ton, and the company was responsible for a greatly increased acreage in Victoria. The company has also co-operated with the Victorian Department of Agriculture and the Council for Scientific and Industrial Research to assist in ascertaining the most efficient methods of growing the crop and processing the straw. It paid cash to the farmer for his crop and encouraged better farming by the payment of bonuses for quality. The company also introduced to Australia the latest types of milling machinery, which local machinery manufacturers have since been able to reproduce. Starting with 200 acres in 1936, the new company had 2,000 acres under contract to it in 1939. The crop from these 2,000 acres was estimated to yield sufficient seed for 8,000 acres in 1940, but the company proposed to deal with only 3,600 acres.

WAR-TIME ACTION.

7. In September, 1939, Flax Fibres Pty. Ltd. discussed the question of the supply of flax with the Council for Scientific and Industrial Research and later with the Department of Supply and Development and agreed to place the whole of its experience and organization behind the Government. Conferences took place between representatives of the Commonwealth Departments of Trade and Customs, Commerce, Supply and Development, the Council for Scientific and Industrial Research, the Victorian and Tasmanian Departments of Agriculture and Flax Fibres Pty. Ltd.

Action was thereupon taken by the Commonwealth in December, 1939, to formulate proposals for sowing at least the 8,000 acres for which seed would be available in 1940. The whole of the fibre and tow produced was to be acquired by the Commonwealth Government and allotted to spinners for use in the manufacture of essential commodities for war-time use. The increased expenditure involved in sowing the increased area was to have been financed in the first place by the Commonwealth Government and recouped out of the profits, if any, derived from the sales of fibre. Subsequently tenders were invited for the supply of line fibre and tow, but only one tender, that of Flax Fibres Pty. Ltd., was received and it was not proceeded with.

Negotiations with the company for an increase of the Australian area continued. These negotiations were practically completed when, following the invasion of Belgium and Holland, Britain suddenly found that supplies of flax which were believed to be adequate were non-existent, and an urgent appeal came from the British Ministry of Supply for increased supplies of flax, and asked that additional areas, for which 400 tons of seed were being hurried forward, be planted. The company thereupon offered to hire to the Government the whole of its undertaking, so that supplies for Great Britain and Australia could be merged into one control, and the services of Messrs. R. B. Hogg and E. H. Kinnear, Junior, were made available as technical advisers in an honorary capacity.

Under an agreement, dated 30th November, 1940, the Commonwealth leased the whole of the undertaking of Flax Fibres Pty. Ltd. and took over the company's business, including the goodwill and assets, for a period of five years, subject to earlier termination under certain conditions. Further reference to this agreement is made in paragraph 11.

8. The quantity of seed sent from Great Britain was sufficient to sow approximately 13,000 acres; with the local seed available, therefore, 21,000 acres were needed. A hurried survey was made of the potential flax-growing areas in Australia, having in mind that it would be necessary to select areas suitable for spring growing of cereal crops and where cool climatic conditions would prevail in the finishing months of production. Suitable areas totalling 21,000 acres were located in Victoria, Tasmania and Western Australia for the production of flax in 1940, as follows:—Victoria, 12,000 acres; Tasmania, 8,000 acres; Western Australia, 1,000 acres. The British Government approach was made so late that a considerable amount of risk was undertaken in sowing the seed even in the late sowing districts, and the Commonwealth therefore undertook to guarantee flax-growers, who entered into production by agreement, a return of at least £4 10s. per acre to cover their costs of production.

COMMONWEALTH ACTION.

9. When the Commonwealth Government thus came into the field, it was decided, in order to avoid confusion, that the whole of the flax production in Australia should be placed under Government control. The Supply and Development (Flax Production) Regulations were thereupon promulgated, in December, 1940, under the *Supply and Development Act* 1939 providing for the appointment of a Flax Production Committee to consist of—

(*a*) Two representatives of the Department of Supply and Development, one of whom shall be the Chairman of the Committee;

(*b*) Two representatives of the Council for Scientific and Industrial Research, one of whom shall be Deputy Chairman of the Committee;

(*c*) Two persons experienced in the production of flax fibre from straw; and

(*d*) A representative of the growers of flax;

which, subject to those Regulations and the direction of the Minister for Supply and Development, shall be responsible for the acquisition and production of flax, and, in particular, for—

(*a*) the making of arrangements with farmers or other persons for the sale of flax seed for the production of flax and for the purchase of flax straw on conditions and at prices approved by the Minister;

(*b*) arranging for the provision of flax mills and sites therefor and plant, machinery and other equipment, furniture and fittings necessary in connexion with the operation and maintenance of flax mills;

(*c*) the efficient and economical operation and management of flax mills; and

(*d*) the making of arrangements in association with the Council for Scientific and Industrial Research for the utilization of available technical knowledge and the conduct of such scientific and technical researches as the Committee considers necessary or desirable in connexion with production of flax and generally for the improvement within the Commonwealth of the flax industry.

The Committee is also responsible for—

(*a*) advising the Minister upon all matters connected with the production and processing of flax in pursuance of these Regulations including the provision of funds necessary therefor; and

(*b*) such other functions relating to flax or the flax industry as are assigned by the Minister.

The personnel of the Committee appointed under these Regulations is as follows :—

Mr. J. A. W. Stevenson, Chairman	Controller of Fibres; Chairman of the Jute Advisory Committee and of the Raw Cotton Advisory Committee, Department of Supply and Development.
Dr. A. E. V. Richardson, Deputy Chairman	Deputy Chief Executive Officer, Council for Scientific and Industrial Research.
Mr. W. H. Dolling, Finance Member	Department of Supply and Development.
Mr. I. H. Boas ..	Chief of the Forest Products Division, Council for Scientific and Industrial Research.
Mr. R. Bruce Hogg ..	Director of James Miller & Co. Pty. Ltd., Brunswick, Victoria, and of Flax Fibres Pty. Ltd. (experienced in production of flax fibre).
Mr. E. H. Kinnear, Junior	Director of George Kinnear & Sons Pty. Ltd., Melbourne, and of Flax Fibres Pty. Ltd. (experienced in production of flax fibre).
Mr. W. F. a'B. Weigall	Gisborne, Victoria, representing the growers.

Messrs. Hogg and Kinnear, the members of the Committee " experienced in the production of flax fibres from straw " were appointed to assist and advise on problems relating to the processing of flax and the installation of plant and machinery. It was explained in evidence that whenever any matters affecting spinners or spinning mills are discussed at meetings of the Flax Production Committee these members take no part in the deliberations. It was also stated that neither of these gentlemen took any part in any negotiations with the Commonwealth, as Flax Fibres Pty. Ltd. appointed two other directors, Messrs. F. S. Vine and H. Kinnear, to attend to that matter.

Mr. Weigall was added to the Committee pursuant to an amending Regulation providing for the appointment of a representative of the growers of flax. He was selected by the flax-growers throughout Australia.

There is also a growers' sub-committee in each flax-producing State which confers with the Flax Production Committee on questions affecting growers, and liaison officers from the Department of Agriculture have been appointed by the States to act in the State concerned as the representative of the Committee and to assist generally in administration. The Flax Production Committee may, with the consent of the Minister, co-opt other persons to act with the Committee in a consultative capacity.

No fees are paid to the members of the Flax Production Committee, but some members, of course, receive salaries as officers of the Commonwealth Public Service.

In addition to Mr. Stevenson, as chief executive officer, and Mr. Dolling, the finance member, the head-quarters staff comprises a chief engineer, a mill inspector, a chief agricultural adviser, and an officer in charge of research into flax processing, each with the necessary staff. The Committee controls all operations and has established mills in Victoria, Tasmania and Western Australia, and it proposes to erect mills in South Australia.

The Joint Committee was informed that although visits had been made to New South Wales and Queensland and the State Ministers of Agriculture consulted, it was not considered advisable to attempt to grow flax for fibre in those States. The New South Wales Department of Agriculture had been provided with some seed for experimental purposes, but no further action had been taken. The Minister for Agriculture in Queensland told the Committee—" I am not prepared to advise the producers in Queensland to embark upon an industry which in my opinion can lead them only to disaster. I do not believe that flax-growing can become an economic, reliable or satisfactory undertaking in Queensland " ; and the Director of Agriculture in Queensland said—" Sufficient trials have been conducted in the State to demonstrate quite clearly that flax-growing for fibre purposes cannot be regarded as a safe industry. Only during seasons when the autumn and winter rainfalls are above average could good crops be produced. During average seasons the straw would be much shorter than that required by the Commonwealth Government. Until such time as a remunerative market exists for short straw, the growing of flax cannot be advocated in Queensland."

10. When the Flax Production Committee commenced its work, there were three flax mills in Victoria owned by Flax Fibres Pty. Ltd., and one at Ballarat owned by Australian Flax Industries Ltd. The latter company was just about to go into liquidation and dispose of its

assets. The Commonwealth purchased the mill and plant for £1,300, and the company was given an option to purchase the premises from the Commonwealth after the termination of the war for £1,300, less depreciation, and to purchase such portion of any additions made by the Commonwealth which may reasonably be required for the processing of flax produced in the Ballarat district in normal conditions (agreed to as 400 tons) at actual cost, less depreciation.

11. The assets of Flax Fibres Pty. Ltd., which, as already indicated, were leased by the Commonwealth, were valued at £13,532, and comprised three mills with plant and machinery, located at Drouin, Colac and Strathkellar in Victoria. The Commonwealth agreed to pay the sum of £1,850 per annum as rental, such amount to include rental for the premises and undertaking, and compensation for depreciation on plant, machinery and assets generally, on a basis of single shifts. In the event of double or treble shifts being worked additional compensation was to be paid at double or treble rates, provided they did not exceed those which would be allowed by the Federal Taxation Department if the Company had been carrying on its own business. The Commonwealth took over the goodwill of the business, together with all contracts entered into with the growers for the purchase of the 1940 crops of flax straw, and purchased at cost all straw fibre, tow and chaff then belonging to the company.

The Commonwealth has power to determine the agreement at any time after giving six months' notice in writing to the company, provided that in so determining the agreement the Commonwealth shall act in such manner as will not be prejudicial to the interests of the company, and that after determination the Commonwealth will not erect or assist any other flax mill in the vicinity of the mills leased from the company, so long as the company carries on business as a flax producer to the satisfaction of the Commonwealth.

On the termination of the agreement, whether by effluction of time or determination by the Commonwealth as provided, the company has the right to purchase either the whole or such part or parts as may be approved by the Commonwealth of any additional buildings, machinery or plant which may have been erected or installed by the Commonwealth on or in any of the properties and mills leased at their original cost, less depreciation at the rate of 10 per cent. per annum on the reducing balance, and the company shall also have the right to purchase any mill (including land, buildings, machinery and plant) erected by the Commonwealth whether in or out of Victoria or such part or parts as may be approved by the Commonwealth at the original cost less depreciation as above.

Should the company fail to exercise its right of purchase, the Commonwealth has the right to purchase the buildings and plant erected on the leased land (excluding additional buildings and plant erected or installed thereon by the Commonwealth) at their present book value less 10 per cent. depreciation per annum on the reducing balance, and also the right to purchase the land at Drouin and Strathkellar, and the company will assign to the Commonwealth, subject to the approval of the local authority, the lease of the land at Colac.

12. It was stated in evidence that at the time these negotiations were proceeding the Commonwealth did not desire to become a flax producer. Its sole object was to do everything possible to encourage the successful production of flax in Australia as part of the war effort. The policy of the Government was not to carry on enterprises of this nature in peace time and it desired to make arrangements for disposal as soon as possible after the war ended to a company which it was to be expected could pay for any assets taken over.

13. In discussing the question of the options given under this agreement to Flax Fibres Pty. Ltd., Mr. Vine, one of the directors who negotiated it with the Commonwealth, stated to the Committee—

> We were perfectly satisfied at this stage that the only possibility which flax production in Australia in the future had, was the firm control by experts who knew something about it. By carefully expanding the industry, and by the scientific application of principles which we had developed, we felt there might be some future.
>
> We felt that the disposal of mills to any one with or without knowledge, could only result in a repetition of the post-war deterioration of the industry, so exemplified after the last war, and that we as spinners would be faced with the same old worries of poor material, and the difficulty of meeting imports.
>
> Finally, we felt that if flax production in Australia did succeed, that we had every right to purchase before others, plant and machinery modelled on what we had proved correct, and which we voluntarily handed over to the Commonwealth for the rapid extension of the industry to meet war-time demands.

Mr. R. B. Hogg, another director of Flax Fibres Pty. Ltd., told the Committee in evidence—

> We made a very great sacrifice when we handed over to the Commonwealth an industry which we had organized for the sole purpose of protecting ourselves in time of war. We made that sacrifice without any suggestion of compulsion. For that alone Flax Fibres Pty. Ltd. is justified in being rewarded with the existing agreement. It is only fair and just compensation for handing over what is a valuable industry to the nation in war-time.

14. Suggestions made by the Joint Committee, that after the war growers might be interested in acquiring mills and conducting them on a co-operative basis, were met by references to the past history of the industry when many of the mills financed by farmers had not been successful, the farmer-shareholders had lost their money and growers had not been paid for their crops. Flax production, it was explained, was a highly technical industry requiring a large amount of capital, labour and skilled knowledge. Adverse seasonal conditions in one area might prove detrimental and spinners would have to be assured that the grade of fibre produced was suitable for their requirements.

EXTENSION OF MILLS.

15. When the Flax Production Committee commenced, it had little information to guide it as to the proper lay-out of mill sites or methods of operation in mills to handle the quantity of flax anticipated last season, because, up to that time, only 2,000 acres of flax had been cultivated in Australia. Some of the mill sites had to be hurriedly selected and were admittedly not as suitable as desired. In some cases the lay-out of the buildings has not been satisfactory; buildings were erected according to the contour of the land to save excavation, rather than for convenient and economic working.

At the outset of operations the Commonwealth works authorities adhered to their standard specifications for similar buildings. These specifications were regarded by the Flax Production Committee as too stringent and too expensive for this type of work, and after lengthy discussion the works authorities agreed to their modification so that the buildings to be erected for the treatment of flax will not be more costly than necessary consistent with ordinary safety.

A new lay-out for flax mills, which is considered a definite improvement, has now been adopted and mills are to be laid out in such a way that advantage can be taken of improved methods of mechanical handling as time goes on, thus eliminating or reducing the heaviest item of cost in a mill, namely, manual handling. The installation of conveyors, elevators, conditioning units, dust extraction plant and other items is being tried out, but it is essential that whatever improvements are introduced must be proved to be efficient and economical before their general adoption. Suggestions were continually being received, but, as the Flax Production Committee indicated, a stage had to be reached where it had to stop considering suggestions and act, if any work were to be accomplished.

16. In connexion with the building programme of the Flax Production Committee, the Joint Committee learned that certain work was being performed by the Shell Company of Australia Ltd., under an agreement, whereby that company prepared plans and specifications for buildings containing plant and machinery according to designs and instructions furnished by the Flax Production Committee, on the basis of actual cost of wages of draughtsmen and direct office expenses, plus 25 per cent. to cover the cost of overhead and supervision by senior members of the Shell Company's engineering staff.

The Chairman of the Flax Production Committee explained that the agreement had been made with the approval of the Director-General of Works of the Department of the Interior at a time when it was found impossible to secure draughtsmen and after consultation with the Victorian Institute of Engineers, when it had been suggested that the Shell Company's organization might be available to assist.

It is understood that the Shell Company's plans are now practically completed and after this work is done it is not proposed to enter into any similar arrangement with the company.

17. The increased programme of planting has necessitated the erection of many new mills and buildings and the installation of considerable additional plant. A mill unit to be worked economically should be capable of processing the product of 1,200 to 1,500 acres on about a three or four years crop rotation. There are at present thirteen mills in operation, six in Victoria—at Ballarat, Colac (recently damaged by fire), Drouin, Koo-wee-rup, Myrtleford and Strathkellar; six in Tasmania—at Hagley, Latrobe, Oatlands, Scottsdale, Smithton and Wynyard, with receiving and deseeding depots at Burnie, Lilydale and Ulverstone; and one in Western Australia—at Yarloop.

For the coming year the number of mills and depots will be greatly increased and additional facilities will be provided at a total estimated cost of £171,000, as follows:—

In Victoria.—Mills at Morwell, Riddell, Terang and Winchelsea; depots at Donnybrook, Lake Bolac, Lismore, Leongatha, Lindenow and Maffra.

In Tasmania.—Mills at Deloraine, Ulverstone (conversion from a depot), Wynyard (on a new site); depots at Branxholm, Campania, Evandale and Sheffield.

In South Australia.—Mills at Auburn, Laura and Morphett Vale; depot at Mou Gambier.

In Western Australia.—Mills at Beelerup and Boyup Brook.

Alterations and additions (including dust collecting plant) are proposed to the existing mills at Strathkellar, Latrobe, Oatlands and Yarloop, whilst dust collecting plants are to be installed in the mills at Ballarat, Koo-wee-rup, Myrtleford, Hagley, Latrobe, Oatlands, Scottsdale and Smithton.

Detailed figures submitted to the Committee comparing estimated costs for mills erected in 1940–41 with those for 1941–42, showed substantial increases—these it was explained were due partly to improvements in buildings and machinery and partly to increased costs of materials and labour. The new scutching machines and deseeding machines proposed to be installed are of a much improved type. The improved scutching machines will be made locally from particulars received from England and although costlier, their design has enabled considerable saving to be effected in building costs.

The Committee was assured that, although the whole of the building operations and the installation of machinery would not be completed when the crop is harvested, the programme was being planned to provide the means for handling the crop as it is received.

RETTING.

18. This year the sum of £82,000 is being provided for the installation of water-retting units at selected mills. Water-retting tanks had already been installed by Flax Fibres Pty. Ltd. at Colac, and they have now been built by the Commonwealth at Myrtleford in Victoria and Hagley in Tasmania.

Should the results of operations at Myrtleford and Hagley prove successful, tanks for water-retting will be installed at other mills where favorable conditions obtain and which are likely to become permanent features in the post-war establishment of the flax industry.

Water-retting has not so far been conducted in Australia on a commercial scale and meanwhile the Flax Production Committee is adopting, in the main, dew-retting.

The general advantages of warm water-retting over dew-retting are said to be :—

(1) Much less time taken—a few days instead of several weeks.
(2) Much less area of land required.
(3) Much less labour involved—especially as mechanical devices for handling the straw are developed.
(4) Reasonable control of process.
(5) Better colour in the fibre produced.
(6) Higher price offered by purchasers for water-retted fibre.
(7) Easy disposal of shive by burning under the boiler.

The development of conditioning units which is now proceeding will save the costly labour previously used in drying water-retted straw.

The disadvantages are—

(1) Higher capital cost of the installation.
(2) Need for large quantities of water of good quality.

Dew-retting is the cheapest method so far as capital cost only is concerned, but its disadvantages are—

(1) Large area of suitable land required.
(2) Only possible to work at certain periods of the year and so cannot be worked to keep pace with scutching. Straw must be picked up and restacked.
(3) Greater uncertainty in retting.
(4) Longer time taken.
(5) Poorer colour and quality of fibre.
(6) Greater labour costs.
(7) Unevenness of retting.
(8) Dependence on weather. Straw fully retted may be ruined by inability to dry it when retting completed.
(9) Difficulty in getting rid of shives.

There is still a heavy demand for dew-retted flax and the production of 100 per cent. of water-retted fibre would not necessarily mean that the high price would be maintained. Water-retted flax is used for certain high grade articles and spinners would not be prepared to pay the higher prices for fibre to be used in the manufacture of low grade articles.

In the schedule of prices for line fibre arranged with the British Ministry of Supply for last year's crop, the prices per ton for tank-retted fibre ranged from £152 to £210, and for dew-retted from £134 to £190, and the Ministry intimated that it was averse to accepting green fibre and hoped that arrangements would be made to produce retted fibre from the increased cultivation areas.

Up to the present only about 2 tons of tank-retted fibre have been sold to Great Britain, half a ton realized £160 sterling per ton, and the balance £152 ; the remainder of the 240 tons already shipped was dew-retted and brought from £134 to £130 sterling per ton.

RETURN TO GROWERS.

19. The Commonwealth realized, when making arrangements in June, 1940, that, to obtain the greatly increased acreage of flax, it would be necessary to make some concessions to growers over and above normal conditions operating in Victoria in previous years. The price offered to growers for flax delivered at the mills had been £5 per ton flax of standard quality, subject to bonuses for better quality and to dockages for poorer quality. This price had applied in the previous year under contracts between Flax Fibres Pty. Ltd. and its growers, and was also the rate for 1940 for a large area in Victoria prior to the entry of the Commonwealth into flax production.

The concessions granted by the Commonwealth were—

A guarantee of £4 10s. per acre.
A reduction in the price of seed from £1 per bushel to 15s.
An allowance in regard to cartage of flax over 20 miles from a grower's property, where it was found necessary to select areas more than 20 miles from a mill.

The guarantee to the growers of £4 10s. per acre in respect of the 1940 crop was determined after consultation with the Victorian Department of Agriculture, as the approximate acreage cost of production with a normal crop of 30 cwt. to the acre, and having regard to the fact that in view of the late decision to grow flax there was time only for the minimum preparation of the ground.

20. Following a conference in Melbourne when growers' representatives referred to the increased cost of production due to the war, the price to be paid for standard flax straw produced from seed sown in 1941 was fixed at £5 15s. per ton delivered at the mill.

With bonuses this amount can reach £7 10s. per ton, viz. :—

	£	s.	d.
Price per ton for standard straw	5	15	0
Standard straw being defined as—			
27 inches long and of even texture.			
Fair average harvesting.			
Not more than 5 per cent. weed content by weight.			
Seed head estimated to yield 3 to 4 bushels per ton of straw.			
Bonuses—			
Seed yield in excess of standard—up to	0	10	0
Fineness of texture and length of straw over 30 inches—up to	0	10	0
Exceptionally good harvesting—up to	0	5	0
Absolute freedom from weeds	0	5	0
First class harvested sheaves (approved in October, 1941) ..	0	5	0
Dockages are on the following scale :—			
Straw under 27 inches long—5s. per ton per inch.			
Bad harvesting—at valuer's discretion.			
Weeds in excess of 5 per cent. the price to be discounted on a weight basis in proportion to the weeds in the crop.			
Seed yield below standard—up to 10s. per ton of straw.			

Where any crop is too short to cut for straw, the arrangements in respect of its harvesting are the subject of negotiation between the grower and the Flax Production Committee. Where a crop has a large percentage of weed the valuer will determine whether it is worth purchasing by the Commonwealth. Contracts for cartage of straw to the mills are undertaken by the Flax Production Committee, and, if desired by the growers, the cost of cartage is deducted from growers' returns. Costs of cartage in excess of 20 miles from the farm are met by the Commonwealth in cases where it is found necessary by the Flax Production Committee to approve of sowing seed more than 20 miles from a mill. Growers bear costs of loading and unloading irrespective of the distance of their farms from the mills.

Growers are charged 15s. per bushel for seed, and the cost of seed is deducted from the proceeds of the crop when ascertained.

No guarantee of a return per acre has been given this year because the crop was sown at the normal time.

21. The Joint Committee had placed before it much evidence from representative growers concerning the price received for their crops as compared with their costs of production. This phase of the industry will be further investigated by the Committee to ascertain whether the return to the grower is reasonable and whether the price paid is adequate to meet his rising costs due to war conditions ; and a report thereon will be presented to Parliament early in the new year.

COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS.

22. Throughout its investigation of the flax industry in Australia the Joint Committee has borne in mind, not only the urgent need for the adequate supply of flax fibre as an essential sinew of war, but has endeavoured to take the long range view of its establishment as a post-war rural industry providing a further crop for the farmer, raw material for an expanding secondary industry, and increased employment in growing, processing and manufacturing.

In the past the flax industry in this country has suffered mainly through the operations of company promoters, whose prospectuses often painted too glowing a picture of the possibilities, and it is essential that the industry should not again be subjected to such objectionable features.

Progress has been made only during periods when an assured market for the fibre at payable prices has been available. When manufacturers were in a position to import cheaper flax substitutes, such as Italian hemp, the growing of flax languished, as there was no stable market for flax fibre available in Australia.

23. On the outbreak of war the rapid expansion of the flax industry, to provide essential supplies for war demands, became a national necessity. Conferences were held and various proposals were discussed in an endeavour to meet the position, and the Commonwealth Government eventually decided to take control of flax production in Australia.

Few persons in Australia, apart from those associated with Flax Fibres Pty. Ltd., knew a great deal about the commercial production of flax or the setting up of buildings, plant and machinery for processing. Ultimately the Commonwealth leased from this company its then existing mills at Drouin, Colac, and Strathkellar in Victoria, and purchased from a company, about to go into liquidation, its mill at Wendouree near Ballarat.

24. To assist the Government in its new enterprise the Flax Production Committee was created ; on its appointment this Committee was faced with a stupendous task. It was created at a time when urgent demands were being made for more and more flax to meet the Empire's war needs. A very small acreage was then under cultivation and a campaign had to be undertaken amongst farmers to grow this new crop as a patriotic gesture, and with the ready assistance and co-operation of the experts in the State Departments of Agriculture, new and suitable areas had to be selected and farmers educated in the growing and harvesting of flax. Mill sites had to be found, buildings erected, and machinery designed, built and installed for the processing of the flax straw. Transport had to be organized to cart the straw from the farms to the mills ; the straw had to be deseeded, retted, scutched and graded ; many technical problems arose, and only the nucleus of an expert staff was available to control operations, and at the same time to train others to meet the ever increasing demands. The resources of the Council for Scientific and Industrial Research were also availed of and valuable research work is still being actively conducted by scientists and engineers. The Flax Production Committee was faced with a colossal task in handling the problems arising from the rapid expansion of the acreage of flax under cultivation in 1939 of 2,000 acres to 60,000 acres two years later. From four small mills in Victoria the industry has expanded to ten mills and six deseeding depots in Victoria, eight mills and six depots in Tasmania, three mills and one depot in South Australia, and three mills in Western Australia.

25. Such a rapid expansion in what was practically a new industry could not be expected to be accomplished without some initial mistakes, but the Joint Committee, after an extensive survey of the work performed in Victoria and Tasmania considers that, on the whole, the Flax Production Committee has functioned satisfactorily. But many of the problems associated with such a rapidly expanding industry have yet to be solved. Last season was, owing to drought, particularly disappointing from a production viewpoint. Until figures showing the operations for a complete season are available it is not possible to comment further upon the results achieved.

26. Abroad the flax industry has been regarded for generations as a peasant industry and much of the work has been performed by family labour. Improved methods are, however now being adopted and extensive alterations are being made in the old systems of processing In Australia, which has already led the world in developing time and labour saving farming implements, such as the stump jump plough and the harvester, many ingenious improvements have already been made in the machinery for the harvesting and handling of the crops, farmers have been educated in the methods best suited to produce high quality flax and are encouraged by bonuses paid for good clean well grown crops.

That Australia is still capable of visualizing revolutionary improvements in farming machinery is evidenced by the action which has been taken by the Flax Production Committee since it took over the control of this industry. The methods of harvesting flax which have been handed down are to a large extent those of the very early days. Some improvements have been made overseas, perhaps the most important being the introduction of the turbine scutcher, but the labour costs of deseeding, spreading for retting, turning and picking up have always been very heavy as all of these operations have been carried out by hand. Over the past nine or ten months the Flax Production Committee has undertaken investigation work in collaboration with one of Australia's leading farming machinery manufacturers with a view to devising a method of deseeding, winnowing, cutting and spreading flax from the standing crop in one operation. Excellent progress has been made on these experiments and machines to try out the ideas will be operating in some large crops in Victoria this year. The ingenuity and skill of Australian engineers and operatives have been brought to the aid of this industry and by the adaptation and variation of existing machinery it is possible that this section of the flax industry will be completely revolutionized. In addition a machine for turning the retted straw and another machine for picking it up have been devised and these also are being tried out with a view to their introduction for the handling of the 1941–42 crop.

27. The Joint Committee is of opinion that the Flax Production Committee should examine closely the possibility of doing as much work as possible on or near the farms. Labour throughout rural districts is scarce and in the flax industry particularly the problem is intensified by the enormous amount of handling necessary in converting flax straw to fibre. Portable deseeding machines may be regarded as a means of solving this problem; most growers have on their farms some type of power plant which would be capable of running a deseeder and, when the straw is deseeded, the farmer could, by the utilization of his own family and farm labour and under the advice and supervision of the local mill manager, ret the straw on the farm if land is available. Such action would be a substantial contribution to the relief of the labour problem in flax-growing areas. It is considered, too, that many operations in the flax industry are eminently suitable for female labour.

28. Naturally the growers are interested in the further operations at the mills as they have been promised a share in any profits which may result from the Commonwealth's undertaking, and any waste or loss during processing may affect the ultimate returns to the farmers.

Some of the earlier mills erected by the Commonwealth, which were seen by the Joint Committee, were not only badly laid out but the type of construction appeared to be more elaborate and costly than required. This matter was referred to by this Committee in its First Progress Report, dated 17th September, 1941, and the Committee has since been informed that modified specifications consistent with ordinary safety have now been adopted. The new lay-out for future mills will be much more efficient and economical and, with the more extensive use of mechanical conveyors and other machines, costs should be further reduced and labour shortage relieved.

29. In the opinion of the Joint Committee the agreement with the Shell Company of Australia for the preparation of plans, &c., was not justified as such work is essentially the responsibility of the Commonwealth works authorities; no similar agreement should be entered into in future without the approval of the Minister.

30. Whilst on the subject of mill construction the Committee desires to draw attention to the need for adequate fire fighting appliances in all flax mills as flax is of a highly inflammable nature. At the Strathkellar mill the Committee noticed that the stand pipes were situated against the walls of the buildings, and in the event of fire could not be readily reached, and that only rubber hose, which is liable to burn, was available.

31. In its report to Parliament, dated 17th September, 1941, the Joint Committee directed attention to the urgent need for facilities being ready to receive this season's crop of flax, which promises to be a record one, and in view of the importance of the matter the Committee again emphasizes the necessity for the immediate provision of all facilities required to handle the crop when harvesting begins in the near future.

32. In the erection of new mills the Committee considers that regard should be given to the area to be served. Extensive and scattered areas around one mill create problems of transport and handling and require large areas for retting, e.g., in the Strathkellar district in Victoria it is anticipated that nearly 10,000 tons of straw will be harvested this season, and it cannot be expected that such a quantity can be economically handled and treated in one centre.

33. Although as a war measure flax cultivation has increased to more than 60,000 acres, evidence shows that Australia's post-war requirements are likely to be met by an area of 20,000 acres of flax. Bearing this in mind care should be exercised in the selection of sites for mills which will prove economic units in the post-war years. Past and present experience will be a guide to the areas where the best quality flax can be grown, and as high grade flax fibre must be the basis of post-war development, it is essential that the proven areas should be those to be retained in production. Any repetition of the problem of marginal lands, such as has occurred in the wheat industry, must be avoided.

34. From a consideration of the evidence heard by the Committee concerning the merits and costs of the different methods of retting, the Committee is of opinion that both dew-retting and tank water-retting might well be undertaken in Australia, and recommends that water-retting plants should be installed at those mills situated in areas where it has been demonstrated that the best quality straw can be produced, contingent, of course, on the necessary conditions, such as adequate quantities of suitable water and appropriate means for the disposal of the effluent being available.

In other areas dew-retting should continue, utilizing to the fullest extent the help of the farmer and the improved machinery.

When the present experiments into chemical retting have demonstrated that this process can be undertaken on a commercial basis, arrangements should be made for its adoption.

In view of the advances being made overseas in the handling of flax by the decortication process and the opportunities it appears to offer for the treatment of straw for certain purposes, it is recommended that further experiments into this phase of flax treatment should be undertaken.

35. Owing to seasonal conditions a ready market has existed for the flax chaff from deseeding operations at the mills, and all surplus chaff has been sold to farmers who have found it a very satisfactory stock food. As a result of analyses made, the Committee was informed that commercially, as a good bulk food for horses and cattle, flax chaff is worth a price about halfway between the price of oaten straw and oaten hay or chaff. Should, however, there be any great surplus of this by-product available, consideration should be given to its utilization in the National Fodder Conservation Scheme, provided, of course, its keeping qualities have been proven.

36. In some districts deseeding operations have yielded large quantities of seed; where a surplus beyond next season's planting requirements exists, it is considered a market might be found for this surplus by utilizing it for the production of linseed oil and meal, although the oil content is generally lower than in seed specially produced for stock-feed purposes. Australia's imports of linseed for oil extraction approximate annually £500,000, and local production might be further stimulated by utilizing surplus seed from the flax industry.

37. In the treatment of seed required for sowing, the Committee was assured that every care was taken to see that noxious weeds are extracted and that only good clean seed is distributed to farmers. Clean seed is absolutely necessary for the success of the industry. Notwithstanding all precautions some complaints were made by farmers that weeds appeared in their crops which they considered could have come only through the seed. To overcome such a happening the Committee considers the most stringent precautions must be taken; seed distributed by the Flax Production Committee to farmers should be in sealed bags bearing a certificate of cleanliness.

To have an area in each State devoted solely to the production of seed, as suggested by Dr. Richardson, might prove a solution to this difficulty.

The principal varieties of seed now being sown in Australia are Concurrent, Liral Crown, and J.W.S., but investigations are being conducted with a view to developing a seed particularly suitable for Australian conditions.

38. Much research and experimental work of a valuable nature has already been undertaken and accomplished by the experts and scientists associated with the flax industry—the Flax Production Committee, the Council for Scientific and Industrial Research, and the State Departments of Agriculture, as well as machinery manufacturers, have all assisted. The work is still proceeding and much more yet remains to be accomplished. The Joint Committee, whilst recording its appreciation of these efforts, believes still more can be achieved to establish the flax industry. Young Australian students of agricultural science, especially those with

an aptitude for engineering, should be afforded the opportunity of proceeding abroad and studying first hand the industry together with all the latest developments. Provided such students' services are retained on their return to Australia, the Committee considers such action would be more beneficial than bringing from abroad experts who would be quite unacquainted with local conditions, and perhaps be disinclined to adapt themselves to Australia's own needs.

39. The Committee considers that even at this stage some word of warning should be sounded—restriction of acreage will be inevitable—Australia's flax requirements, it is estimated, can be met by the cultivation of 20,000 acres. Whilst the Committee expresses appreciation of the patriotic efforts of farmers to meet demands by increasing the area up to 60,000 acres, there is bound to be disappointment in many districts when and where acreage has to be reduced and confined to those areas best suited for the growing of high quality flax.

40. The advantages offered to agriculturalists by co-operative movements, and their ability to take effective control of the handling of their own products, have been repeatedly demonstrated both in Australia and elsewhere. The dairying industry in Australia is an outstanding example of what can be achieved by co-operation.

In the post-war development of the flax industry the Committee is of opinion that the flax growers should be afforded the opportunity of further participation in the industry by being encouraged and assisted to form co-operative associations to take over such flax mills as are considered best located and equipped to supply Australia's post-war requirements. The need for efficient management is, of course, a prime necessity in a co-operative venture, but, as a result of the Commonwealth's present activities, there will be trained managers and staffs available, and with the benefit of the greater knowledge and experience gained during the war years, the assistance of improved machinery and plant, together with the simplification of processing methods as the outcome of scientific research, the farmers should be in an advantageous position to participate directly and more widely in the conduct of the flax industry. Such action would extend the desirable principle of decentralization of industry. Flax is essentially produced in country areas. The bulky nature of the crop necessitates the treatment of the straw near the growing areas, it is then only a further step to utilize the fibre nearby, and the Joint Committee visualizes the establishment of the necessary secondary industries in country centres where better living conditions and a more healthy environment would obtain than in the congested metropolitan areas. To induce manufacturers to so establish their factories, the Committee is of opinion that every encouragement and assistance should be given by the Commonwealth, State and local authorities.

41. The Government should continue in post-war years to exercise some control over the growers and the conduct of the mills to ensure that only suitable areas are cultivated, pure clean seed used and good farming methods employed, and that only high grade flax is produced.

The mills retained in operation should form the nucleus around which Australia's flax industry could be expanded should future war demands necessitate it.

42. The whole of the world's flax has been produced in the past in the most conservative low wage countries of the world, which have refused to adopt modern improvements. Consequently there is today much scope for the adoption of improved technique in treating flax. If production costs can be sufficiently reduced the future of flax production in Australia is assured. But Australia must produce a high grade product and one objective must be to see that sufficient manufacturing industries are established to justify its continuance. Spinners in Australia should be able to use the product of at least 20,000 acres and encouragement should be given to manufacturers to extend their operations.

43. The agreement between the Commonwealth and Flax Fibres Pty. Ltd., executed on the 30th November, 1940, has been closely examined by the Joint Committee, and the Committee is unanimously of opinion that the best interests of the Commonwealth and of the flax industry have not been safeguarded. Under this agreement Flax Fibres Pty. Ltd. is given, on the termination of the agreement, "the right to purchase any mill (including land, buildings, machinery and plant) erected by the Commonwealth whether in or out of Victoria."

If this option is exercised, it appears to the Committee that this company will have a monopoly of the flax industry in Australia. This is wholly undesirable. The company could choose such mills as it wished, and if, as might naturally be expected it selected the mills with the best prospects and with sufficient capacity to treat the total quantity of flax needed in Australia after the war, the remaining mills could not be economically conducted and would consequently be valueless, except for demolition or sale as second-hand material.

Further objection to the agreement is that, under certain conditions, all new buildings and fixtures costing many thousands of pounds placed by the Commonwealth on the land of the mills belonging to the company might revert to the company, as no express provision appears to have been made in this regard.

The Committee recommends that the agreement be cancelled—preferably by negotiation, but, if necessary, by legislation—and that the Commonwealth should negotiate for the purchase from the company of its original land, buildings, plant and machinery, at the Colac, Drouin and Strathkellar mills.

44. Although at the time it was negotiated, the cultivation of an area of 21,000 acres of flax was contemplated, it is doubtful whether it was then foreseen that the area would increase to 60,000 acres in the following season, and that over 30 mills and depots located throughout Victoria, Tasmania, South Australia and Western Australia, and costing approximately £500,000 would have to be established to handle and process the crop.

45. In the event of a monopoly being created by this agreement it would not be possible to give effect to the recommendation of the Joint Committee that selected flax mills should be operated, after the war, by farmers on a co-operative basis.

46. Although this agreement was signed by the Solicitor-General to the Commonwealth, it was explained to the Committee that this officer signed it only because it contained provisions relating to the leasing of land. The Lands Acquisition Act provides for agreements relating to land to be signed by the Attorney-General. Under the Solicitor-General Act the Attorney-General has delegated that power to the Solicitor-General.

47. Whilst it might be conceded that it is not within the knowledge of the law officers drafting the terms of an agreement to appreciate the ultimate effect of any agreement which they are instructed to prepare, the Joint Committee considers it essential that, where any agreement is contemplated which embraces new or unusual features, it should be the responsibility of the Department requiring such agreements to be prepared to draw the attention of the law officers to these special features ; a senior officer in the Attorney-General's Department should thereupon carefully scrutinize such documents to ensure that the interests of the Commonwealth have been adequately safeguarded.

48. In view of its experience with this particular agreement the Joint Committee considers that any similar agreements associated with war-time activities which have been entered into by the Commonwealth should be closely examined and reviewed by the Attorney-General, to ensure that the interests of the Commonwealth have been properly safeguarded.

SUMMARY OF COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS.

Paragraph.	
22	The flax industry should not again be subjected to operations of company promoters.
25	The Flax Production Committee has, on the whole, functioned satisfactorily.
26	Improvements in harvesting and processing machinery have been effected.
27	The possibility of doing more work on or near farms should be examined.
28	The earlier mills were badly laid out and their construction was too elaborate and costly.
	More extensive use of mechanical conveyors and other machines would reduce costs and relieve labour shortage.
29	The agreement with Shell Company of Australia was not justified ; no similar agreement should be made without the approval of the Minister.
30	Adequate fire-fighting appliances should be available at all mills.
31	Facilities to receive this season's crop must be provided immediately.
32	One mill should not have to serve extensive and scattered areas.
33	Flax areas and mill sites should be selected having regard to post-war development.
34	Dew-retting and water-retting should be undertaken in Australia.
	Water-retting plants should be installed at those mills in areas producing the best-quality straw.
	Chemical retting might be adopted when experiments demonstrate it is a commercial undertaking.
	Decortication experiments should be continued.
35	Flax chaff surplus not required by farmers might be used in the National Fodder Conservation Scheme.
36	Seed not required for sowing might be used for linseed oil and meal.
37	Seed for sowing must be clean and be distributed to farmers in sealed certificated bags.
	An area might be devoted in each State to seed production.
38	Further research work should continue.
	Young Australian students should be sent abroad to study the industry.
39	Restriction of acreage in Australia will be inevitable.