1-1-1970

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LINSEED—AN ALTERNATIVE CROP FOR THE SOUTH COAST

2. What is the future for linseed?

By R. J. DOYLE, Officer-in-Charge, Esperance District Office and R. J. GUYTON, Rural Economist, Rural Economics and Marketing Section, Department of Agriculture

In a preceding article* we stated that the expansion of linseed in Western Australia was due primarily to the ability to sell on the export market at current ruling prices.

This is necessary because Australia's domestic needs are likely to be supplied in most years by Eastern States producers. The fluctuations in production of linseed (Table 1) are due to over-supply in good seasons (the case in 1964-65) or to reduced yields, as in 1966 and 1967.

External trade statistics

Imports rose only to offset the effects of reduced production during the droughts in the Eastern States.

Australia's domestic requirements have been estimated at about 20,000 tons of seed.

This means that Australia's requirements for linseed can be expected to be met in most years without considering any expansion in W.A.

Linseed produced at Esperance in the last two years could have been sold on the home market, but the marketing authority—The Grain Pool of W.A.—saw the need to develop export markets to handle the quantities of linseed expected as this industry grows.

Industrial uses declining

Of the three industrial vegetable oils (castor seed and tung oils are the others), linseed oil is the most important, providing about three quarters of the total supply. Linseed oil is the drying agent in paints, varnishes, linoleum, oil cloth and technical inks. Small quantities are used in soft soaps and to protect concrete surfaces against salt corrosion, while in some Asian countries the oil is used for human consumption.

The use of linseed oil has declined over recent years because of the introduction of synthetic-based paints and vinyl floor coverings.

Table 1.—Linseed production and imports in Australia

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Area ('000 ac.)</td>
<td>97.0</td>
<td>117.5</td>
<td>133.8</td>
<td>24.6</td>
<td>35.6</td>
<td>54.5</td>
<td>65.0</td>
</tr>
<tr>
<td>Production ('000 tons)</td>
<td>25.7</td>
<td>29.5</td>
<td>46.6</td>
<td>6.1</td>
<td>13.7</td>
<td>10.5</td>
<td>20.0</td>
</tr>
<tr>
<td>Imports</td>
<td>7.7</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td>10.8</td>
<td></td>
</tr>
</tbody>
</table>

From "Trends in Australian Rural Production and Export"


54
Other substitutes for linseed oil are safflower and soya bean oils. Synthetic resin manufacturers state that safflower oil can replace linseed oil in half its present uses. Paint manufacturers claim, however, that safflower cannot displace linseed extensively as a component of paint or oleoresinous varnishes.

Figures available from the United States (in Table 2) show a declining use of linseed oil from 1960-61 to 1966-67. Western Europe and Japan have been able to expand their local markets to maintain the demand for linseed products.

**World production and trade**

The international trade in linseed is most important to the Western Australian linseed producer.

Since 1960-61 world production of linseed has averaged more than 3,000,000 tons a year, but in 1967-68 the lowest production in 23 years was recorded—2.5 million tons of seed. Reasons for the cut-back in production include the reduced plantings in North America, where Canadian farmers in particular had found other grains more profitable. At the same time adverse weather affected Argentine linseed production in 1966 and 1967. With the introduction of wheat quotas and falling coarse grain prices it was reported that Canadian growers had increased their acreage from 1.5 million acres to 2.4 million acres in the last season.

The leading exporters are Canada (seed), Argentina (oil), the United States (seed and oil) and Uruguay (oil), who trade with United Kingdom, West Germany the Netherlands, Japan and the Soviet Union.

The combined shipment of linseed as seed and oil from the exporting countries to Western Europe comprises about two-thirds of world trade. Table 3 shows the

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Paints and varnishes</td>
<td>137.9</td>
<td>141.5</td>
<td>153.1</td>
<td>150.9</td>
<td>131.2</td>
<td>126.3</td>
<td>122.8</td>
</tr>
<tr>
<td>Others (a)</td>
<td>27.3</td>
<td>27.3</td>
<td>22.4</td>
<td>22.3</td>
<td>22.4</td>
<td>23.7</td>
<td>22.8</td>
</tr>
<tr>
<td>Apparent domestic consumption</td>
<td>165.2</td>
<td>168.8</td>
<td>175.5</td>
<td>173.2</td>
<td>153.6</td>
<td>150.0</td>
<td>145.6</td>
</tr>
</tbody>
</table>

(a) includes linoleum, oilcloth, resins, printing ink, lubricants, fatty acids.


**Table 3.—Major exporting and importing countries**

<table>
<thead>
<tr>
<th>Exports ('000 tons)</th>
<th>Linseed</th>
<th>Linseed Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>1965</td>
<td>1966</td>
</tr>
<tr>
<td>Canada</td>
<td>371</td>
<td>402</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>174</td>
<td>98</td>
</tr>
<tr>
<td>Argentina</td>
<td>202</td>
<td>10-3</td>
</tr>
<tr>
<td>Uruguay</td>
<td>584</td>
<td>739</td>
</tr>
<tr>
<td>Total World</td>
<td>593</td>
<td>548</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Imports ('000 tons)</th>
<th>1964</th>
<th>1965</th>
<th>1966</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.K.</td>
<td>114</td>
<td>125</td>
<td>99</td>
</tr>
<tr>
<td>West Germany</td>
<td>41</td>
<td>42</td>
<td>47</td>
</tr>
<tr>
<td>Japan</td>
<td>93</td>
<td>102</td>
<td>115</td>
</tr>
<tr>
<td>Netherlands</td>
<td>75</td>
<td>69</td>
<td>116</td>
</tr>
<tr>
<td>Soviet Union</td>
<td>21</td>
<td>44</td>
<td>21</td>
</tr>
<tr>
<td>Total World</td>
<td>593</td>
<td>548</td>
<td>648</td>
</tr>
</tbody>
</table>

Source: Commonwealth Secretariat, Nov. 1968
major exporting and importing countries and the volume of trade over the years 1964, 1965 and 1966.

Export market prices
The prices paid for linseed in world centres are readily available. It is export difficult to obtain the production, export and import figures for the recent season to equate the price changes with the anticipated supply.

Looking back over the last few years, the prices paid for linseed in United Kingdom declined following the bumper season in North America in 1965, but rose sharply in 1967 when there was an expected reduction in supply of linseed. The price is likely to decline in the next few years as a greater acreage is planted.

Future Production in Australia
Most Australian States could expand linseed production given market stability over and above the domestic scene. Queensland has more than 200,000 acres suitable for linseed production, while in Western Australia 400,000 acres along the south coast could be planted to linseed by 1980.

The introduction of wheat quotas in 1969 and a falling price for coarse grains have made alternative crops such as linseed more attractive.

Production estimates for 1969 were:
Queensland—anticipated sowings of 17,000 acres of linseed and some 15,000 acres of safflower (with sunflower acreages reported to be on the increase).
New South Wales—estimates of cottonseed 62,000 acres, linseed 53,000 acres, rapeseed 2,500 acres, safflower 5,500 acres and sunflower 15,000 acres.
Victoria—grew 17,500 acres of linseed in 1968-69 and growers had shown a vigorous interest in rapeseed.

Drought affected plantings in Queensland and W.A., but seasonal conditions seemed favourable in Victoria and N.S.W.

Projected figures for Western Australia indicate that the amount of linseed available for export could be 70,000 to 80,000 tons of seed by 1980. This would represent at least 12 per cent. of the average world exports of linseed since 1961. It must be realised that linseed in world oilseed trade is likely to decline gradually unless new technology reveals alternative uses for linseed products.

World trade and expansion
In recent years production in North America and Argentina has been low and with the corresponding price rise, farmers in these countries are expected to increase their acreages.

As in Australia surplus wheat and lower coarse grain prices will make linseed and other alternative crops more attractive to growers in the major exporting countries. Canadian growers planted 0.9 m. acres (60 per cent.) more than the previous season's area in 1969.

Given good seasons and increased acreages the record production of nearly 3.5 million tons will again saturate the limited market and prices are expected to revert back to the 1965-66 level.

If the marketing position of wheat and coarse grains improves, there will not be any great reduction in linseed price. A gradual price decline is likely, as linseed is replaced slowly by other vegetable oils. Surpluses of cereal grains in North America and Argentina will bring huge increases in linseed acreages as well as other oilseeds. This will create market problems with linseed and a lower price (than the 1966 level) could be received.

Supply projections
Economic incentives such as the relative grain and oilseed prices received by producers will largely determine the rate at which linseed production will proceed in the future. Two FAO reviews suggest that while fats and oils in total will increase in line with past trends, little or no increase in the output of linseed is expected, as world demand is stagnant (with real prices remaining constant).

Implications for linseed growers in W.A.
Although in the last two years production decreased in the Eastern States and the major exporting countries, the future of the local industry must be based on the export market.

Projected production for Esperance and Albany by 1980 is about 12 per cent. of world trade, assuming only small increases
in the world requirements over the next 12 years. Although Japan is at present the only market outlet for W.A. (because of the small quantities produced) our future production represents double Japan's present requirements.

With world demand static despite an increasing population, world supply will increase after two poor years and the price received can then be expected to decline again. An increase of 12 per cent. in supply of linseed to the export market will help to further depress prices.

Although linseed prices cannot be predicted, the local grower has a strong competitive position when compared with the rest of the world because—

(a) At present prices linseed is by far the most attractive crop on the south coast.

(b) There is potential for growers to improve yields as experience with linseed growing increases. In two years of recent production, growers new to the industry have averaged 11 bushels an acre, with a range from nil to 24 bushels an acre. (Climatic conditions and heavy insect damage caused low yields in Esperance in the last season).

(c) The areas most suitable for linseed have a large property size by world standards and as the farms around Esperance and Albany consolidate, they should still have an advantage in lower costs of production.

(d) Disease and insect problems are considered to be lower in Esperance at present than for other areas, but this need not continue. Major outbreaks of rust could stop all production until another resistant variety was bred.

**Linseed for edible oil**

Some linseed oil is used for human consumption in India and to a far less extent in Canada. F.A.O. estimates (1968) that the production of edible vegetable oils will increase from 13.2 million tons (1961-63 average) to 20.1 million tons by 1975. Despite the complexities associated with the fats and oils market, it is apparent that if linseed could be used as edible oil there would be a much greater scope for expansion in the industry in W.A. and there would be smaller “depressing” effect on prices, than if linseed was produced solely for industrial use.

**Conclusion**

In the short term, linseed production in Western Australia will remain attractive for farmers along the south coast, although the long term outlook for linseed is one of declining importance in world trade.

Production in North America and Argentina will have impact on the price received in W.A. and on our ability to sell the large quantities expected on the world market.

Much will depend on the profitability of alternative crops.

Any change in relative costs of production due to disease control or increased insect activity, together with declining prices received, will tend to make linseed less favourable.

New techniques that create wider uses for linseed products, especially into the edible products field, would create a new stimulus for linseed growers. This must be offset by the possibility that new technology may lower the prices of, and increase the uses for, linseed's close substitutes, bringing a decline in the demand for linseed oil.