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Linseed—A forgotten crop

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Linseed has become a forgotten crop in Western Australia. From a peak production of 6,200 tonnes from 12,500 hectares in 1969, and an apparently bright future, it dwindled to a bare 80 tonnes from 250 hectares in 1973.

This article looks at some of the reasons for this decline and, with linseed fetching all-time record prices on world markets, gives reasons why the crop should be grown.

Western Australia is now almost out of the linseed growing business as Figure 1 shows. Many factors have combined to bring about this decline:

- In 1970, when wheat and wool were in serious trouble and a rise in popularity of linseed might have been expected as farmers searched for alternative sources of income, rapeseed appeared and quickly established itself as an easier to grow and more profitable crop. Growers diverted land which might otherwise have grown linseed to rapeseed and rapeseed acreages rose very rapidly in the next three seasons with linseed falling away to insignificance.
- Linseed was beset by many problems compounded by a run of seasons not suited to the crop. This is graphically illustrated in Figure 1c where average yields are seen to decline from a high in 1968 of 700 kg/ha to only 200 kg/ha in 1972. Sand blasting of young crops; inadequate weed control due to weather conditions combined with linseed's inherently poor competitive ability against weeds, contamination of seed with the weed false drake, and weather problems at harvesting all tipped the balance away from linseed towards rapeseed.
- The years 1970-72 were dull years for the world linseed market, with local prices hovering around $75 to $80 per tonne to the grower. Stocks of linseed were high with the main exporting countries Canada, U.S.A. and Argentina having large reserves of linseed left over from big crops in previous years. Synthetics were posed as a major threat to the industry and buyer interest was almost non-existent. Local growers could see little future in the crop, particularly as rapeseed prices were better at the time.
- Recently the return of boom prices for wheat, wool and coarse grains has pushed linseed even further from growers' minds.

New developments

But several significant factors suggest growers should again look at linseed as an alternative crop enterprise.

World markets

Linseed is again the glamour crop on world vegetable oil markets. Figure 2 shows the dramatic leap in prices over the past year.

Several times the oil has reached $1,000 per tonne in hectic trading on world markets. There are several reasons for this rise. The main exporting countries Canada, U.S.A. and Argentina which together are responsible for over 90 per cent of the linseed coming into world markets, have reduced their areas sown to the crop in recent years (Fig. 3). This is in response to low prices for the seed relative to alternatives and because they already held large stocks on hand from record crops in the late 1960s. This reduction in area has been accompanied by poorer crops due to seasonal conditions, particularly in Argentina (Fig. 3). Two further factors have aggravated the supply position in the short term. The fuel crisis has contributed by threatening delivery of supplies from producing countries, and by causing renewed interest in linseed as a raw material for industrial uses as synthetic alternatives become scarce and more costly. The acute protein shortage which developed in mid-1973 and finally led to a temporary embargo by the U.S.A. on the export of soya beans, the backbone of the protein market, forced European consumers to feed whole linseed to livestock.

The production of linseed in the 1973/74 season by the big three exporters is expected to be only 56 per cent of the production achieved in the late 1960s (Fig. 3). Reported build-up of flax rust in Canada may accentuate the trend. This, combined with very small carry-over stocks, will result in a very tight supply position and good prices for linseed (of at least $150 per tonne) should continue for at least two years.

Comparing the value of linseed (see below) relative to the other field crops grown in Western Australia during 1973, it can be seen that linseed was worth three times
the value of wheat, four times the value of barley, and five times the value of oats.

<table>
<thead>
<tr>
<th>Grain</th>
<th>Price per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linseed</td>
<td>$300</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>$130</td>
</tr>
<tr>
<td>Wheat</td>
<td>$101</td>
</tr>
<tr>
<td>Barley</td>
<td>$70</td>
</tr>
<tr>
<td>Oats</td>
<td>$60</td>
</tr>
</tbody>
</table>

Use in rotations

South coast and high rainfall area farmers are anxious to take advantage of the very high prices prevailing for wheat at present.

In many of these areas wheat production is risky due to severe attacks of root rot diseases if crops are planted immediately after clover ley. Linseed is a proven cleaning crop and finds a very useful place in paddock rotations for this reason.

Blackleg in rapeseed

Growers can no longer grow rape-seed with any confidence due to the appearance of the devastating fungal disease blackleg over the past two years. There does not appear to be any short-term solution to this problem.

Better variety

A better linseed variety is available now. Department of Agriculture trials with new linseed varieties have continued over the past few years despite farmers’ lack of interest in the crop. These have shown the white flowered Victorian variety Glenelg to be equal in oil content and to yield an average 15 per cent higher than the existing varieties Kameniza and Gibson.

Full recommendations are given in the December, 1973, issue of the Journal of Agriculture. The W.A. Seed Board has supplies of Glenelg and Kameniza for sale. This seed is being handled for the Board by the Grain Pool of W.A.

Growing linseed

Successful linseed crops depend on careful management. The crop is particularly sensitive to weeds and insects and growers who have consistently grown good crops pay great attention to these details. Department of Agriculture Bulletin 3726 sets out in detail the most important points to watch when growing linseed, and intending growers should read this carefully. Briefly, the main points are:

![Graph showing the decline of linseed production in W.A. over the past few years]
Climate: Areas which receive more than 500 mm annual rainfall and preferably have a long growing season are suitable for linseed production. Most of the Great Southern and south coastal areas fall into this category.

Soil type: Linseed grows well on sandy surfaced south coastal soils with clay at 15 to 30 cm and on the gravelly sandy loams of the Great Southern. Paddocks where sand blast is a known problem, heavy clay surfaced soils and paddocks subject to prolonged waterlogging should be avoided.

Rotations: Linseed can be planted as a first crop after good clover, when it can act as a “cleaning” crop for cereals. It has a high fertility requirement and seldom grows well on new land.

Weed control: Linseed is an erect, narrow-leaved plant and has poor shading ability. It therefore competes poorly with weeds. Great care should be taken to control weeds, particularly the difficult annual (Wimmera) ryegrass, and many successful growers believe weed control is the secret of linseed growing. The recommendations for ryegrass control are set out in Bulletin 3726 and in the March, 1973, issue of the Journal of Agriculture.

Varieties: Sow Glenelg if possible, otherwise Kameniza.

Time of Sowing: Depends upon obtaining good weed control first. Usually June, but can be sown as late as mid-July in long growing season areas.

Depth of sowing: 1 to 2 cm deep.

Rate of seeding: 35 to 40 kg/ha of clean seed of 90 per cent germination. Some samples show very poor germination due to difficult harvesting conditions, and growers should always arrange a germination and purity check by the Department of Agriculture. Seeding rates should be adjusted upwards proportionately if germination is low.

Fertilisers: Apply phosphate and nitrogen at the rates recommended for wheat crops in the district. The area should also have received the applications of trace elements recommended for each particular soil type.

Diseases: Pasmo and linseed rust have caused some problems in the past. Pasmo is avoided by pickling seed and keeping away from diseased linseed stubbles. Present varieties are rust resistant.

Insects: Red legged earthmite and native budworm can devastate crops. Standard recommendations for killing insects should be followed.

Harvesting: Manufacturers’ recommendations should be followed for machine settings. As weather conditions change during the day, frequent adjustments may be necessary if dirty samples and cracked seed are to be avoided. Special care is needed if the seed is to be kept for next year’s sowing. Severe threshing can cause low germination by cracking and bruising seed.