



**Lupins**

Although lupins (a leguminous crop) have been grown in Western Australia for many years for soil improvement and grazing (see Fodder Crops in the 'Pastures' commentary above), it is only since the early 1970s that larger areas have been grown to produce seeds for processing into animal feed and oil.

Lupins are grown in winter in the wheat-pasture rotation system and, in 1975-76, were almost exclusively confined to the northern wheat belt in Western Australia, where 120 000 ha out of the total area of 140 000 ha were grown. Since then the area in Western Australia declined to 46 000 ha in 1979-80 but increased in the eastern States (30 000 ha in New South Wales, 15 000 ha in Victoria and 14 000 ha in South Australia), where this crop is grown along the wetter margins of the wheat belt extending from central New South Wales to South Australia.

Seed grain production has risen over recent years to 78 000 tonnes in 1979-80 and is mainly processed into animal feed.

**Rice**

Rice growing on a commercial scale began in 1924 when 62 ha of rice were grown in the Murrumbidgee Irrigation Area. By the early 1950s this area had increased to 15 000 ha and rice growing had spread to

other irrigated areas in the Riverina of New South Wales. Since then the rice area has increased to over 100 000 ha (Table 10).

Rice is not mapped separately, its distribution being clearly shown on the 'Croplands' map by the blue dots in south-central New South Wales, where 95% of the crop is grown. The only other area of significance is the Burdekin delta, where rice growing began in 1966 and covered 5000 ha in 1980. About 500 ha of rice are also grown in the Ord irrigation area in northern Western Australia.

In the main areas in southern New South Wales, rice is grown in irrigated bays in rotation with wheat and pasture. The crop is sown in late September or early October, flooded and drained intermittently until established, then grown in 50-150 mm of water until ready for harvest in the period March to May. The bays are then drained to allow mechanical harvesting. Because rice has a very high water requirement the area sown is regulated, to a large extent, by the amount of water allocated by State water authorities in consultation with organisations representing the industry.

Current annual production is about 600 000 tonnes, of which about half is exported. Long-grain rice now forms more than 40% of the crop and is being increasingly grown in response to rising overseas demand.

**OILSEEDS**

The crops grown specifically for the oil they contain are shown in Table 11. Vegetable oil is also a by-product of cotton, maize and lupins. The oilseed area has increased considerably since the 1950s and 1960s, with the sharpest increase in the first two years that wheat quotas were imposed (1970 and 1971), when oilseeds—particularly sunflowers—were grown as an alternative to wheat.

Sunflowers now occupy over half the area of all oilseed crops. They are grown throughout the eastern wheat belts, although mainly from central New South Wales northward, predominantly as a dryland summer crop. In northern areas such as the Darling Downs sunflowers are a useful change-over crop in the rotation system because of their short growing period (about four months) and because they can be sown earlier (late August-September) than most other summer crops. The seeds are crushed to produce a high-quality salad and cooking oil which is also used to make margarine.

**Table 11. Oilseeds, Australia ('000 ha)**

Crop	1950-51	1965-66	1975-76	1979-80
Sunflower	2.5	4.3	137	221
Safflower	..	24.0	40	54
Peanuts	6.9	23.0	27	32
Soybeans	..	..	26	57
Linseed	19.0	10.0	16	17
Rapeseed	..	..	16	42
TOTAL	28.0	62.0	262	422

Sources: Australian Bureau of Statistics—Primary Industries: Part I—Rural Industries 1950-51; Rural Industries 1969-70, Bulletin No. 8; Crop Statistics, Australia: Season 1975-76; and Crops: Australia: 1979-80.

Safflower, a relatively new crop to Australia and belonging to the thistle family, is mainly grown as a winter crop in the wheat belts of northern New South Wales and Queensland, although it is also grown as a spring or early summer crop as far south as north-central Victoria. Growing is concentrated in the Central Highlands of Queensland but, since the map was compiled, increases have occurred in central and northern New South Wales in the Coonamble, Moree and Walgett areas. The oil produced is used for cooking, margarine manufacture and industrial purposes.



Figure 21. Seedling rice in the Murrumbidgee Irrigation Area, New South Wales.



Figure 22. A young soybean crop near the Macquarie River west of Dubbo, New South Wales.