

Peanuts are a summer-grown sub-tropical legume crop. The seed pods mature underground so the crop requires a well-drained sandy loam soil for efficient harvesting. The crop is restricted to Queensland, particularly the Kingaroy area. The area cropped, in contrast with other oilseeds, has remained relatively stable over the last decade. Most of the crop is marketed as nuts while the remainder is crushed to produce an oil used in cooking and in the manufacture of margarine.

Soybeans are also summer-grown but restricted, because of susceptibility to frost damage, to northern New South Wales and Queensland. While they can be grown in moister coastal areas, they are mostly grown in irrigation areas inland. Since the map was compiled the area of soybeans doubled to 57 000 ha in 1979-80, increasing in all areas shown on the map as well as in the Macquarie irrigation area of central New South Wales. Crushing produces oil for cooking and industrial purposes and a high-protein meal for stock feed.

SUGAR AND COTTON

Sugar Cane

Sugar cane ranks second only to wheat in value of production. However, it occupies a much smaller area (about 350 000 ha in recent years) and is completely restricted to small areas of mostly alluvial soils along the wetter tropical coastlands of Queensland and, to a lesser extent, northern New South Wales.

Sugar cane is not mapped separately, but its distribution is clearly shown on the 'Croplands' map by the clusters of blue dots close to the coast from Grafton to north of Cairns. All these areas, except the Burdekin delta near Townsville, have a summer rainfall greater than 750 mm, which is essential for growth. A frost-free winter dry season is also necessary for building up the sugar content of the stalks and drying the foliage for burning prior to cutting. Although the irrigation of cane is increasing, most is still rain-grown except in the Burdekin delta, where irrigation is essential.

Cane is planted in early winter in the north and late winter in the south. In the north it is cut after a year's growth but in the cooler south growth is slower and two



Figure 23. Cutting sugar cane in Queensland. The harvester removes the unwanted upper stalks, cuts and chops the useable cane and loads a field bin hauled by an accompanying tractor.

years are usually needed before the cane is ready for cutting. An average cane farm grows about 50 ha, under contract to supply a local sugar mill. A quota system of 'assigned land' operates to regulate production in accordance with domestic requirements and international sugar agreement obligations.

Sugar cane produces a greater weight of vegetation per hectare than any other field crop, one hectare producing about 80 tonnes of stalk and about 25 tonnes of foliage. Crushing and processing 80 tonnes of cane produces 22 tonnes of plant fibre ('bagasse'), which is used to fuel the mill boilers; 2 tonnes of crude molasses, used to make rum, ethyl alcohol, fertiliser and stock feed; and 11 tonnes of raw sugar. About 3 million tonnes of raw sugar are produced annually, of which about 70% is exported.

Cotton

Cotton has been grown without irrigation for over a hundred years, mostly in Queensland. However, modern irrigated farming of cotton, which gives much greater yields, began in the 1960s and is largely centred in new irrigation areas. The distribution of the 30 000 ha grown

in 1975-76 is shown by the clusters of blue dots on the 'Croplands' map in central and northern inland New South Wales, and around St George and Biloela and on the Darling Downs in Queensland. By 1979-80 the area of cotton had increased to 75 000 ha and the growing area in all centres shown on the map had increased and, in addition, about 3000 ha were grown in the Emerald irrigation area in central Queensland. Almost half the crop is grown on the Namoi River downstream from Narrabri in northern New South Wales.

Cotton is a summer crop, planted in October-November and harvested by mechanically picking the opened bolls from the chemically defoliated bushes between March and June. It is very susceptible to insects, particularly caterpillars of the *Heliothis* moth, so that frequent insecticide treatments form a major proportion of production costs.

After picking, the raw crop is transported to local gins, sited close to growing areas because of its bulky nature. Here the cotton lint is separated from the seeds, which make up two-thirds of the weight of the unprocessed crop. The seeds are crushed for oil and the residue used for stock feed. In 1979-80 about 80 000 tonnes of cotton lint were produced, of which about 60% was exported.



Figure 24. Cotton picking in northern New South Wales. The bushes have been chemically defoliated.

