

# Enterprise Profile – Poppies

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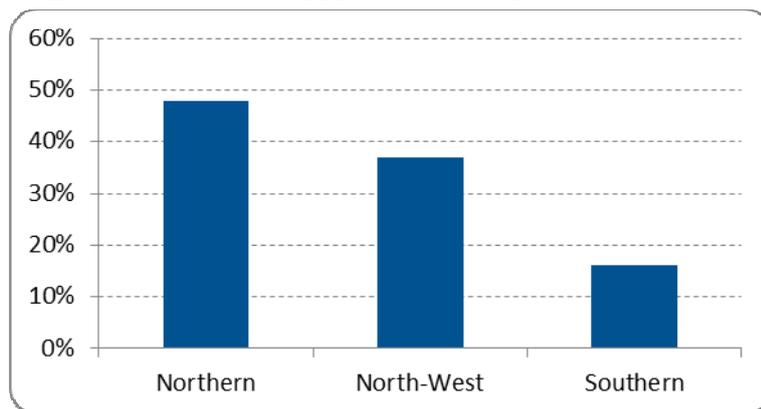
## The Tasmanian poppy industry

Since the first commercial planting in 1966, poppies have become one of Tasmania's agriculture's most important crops. Around 25,000 hectares are now planted to poppies throughout the state each year (Figure 1), a higher land use area than any other crop. The farm-gate value of Tasmania's poppy industry has been estimated at around \$70 - 90 million, or around 8 per cent of the value of overall state agricultural production.

Poppies are grown under contract for their alkaloid content, which is processed and sold as narcotic raw material or further processed and sold as active pharmaceutical ingredient. The industry is vertically integrated with all poppy growing and initial processing, as well as a significant proportion of manufacturing, undertaken in Tasmania.

Due to the narcotic content of the poppy it is a government requirement that all stages of growing and production are carefully controlled and supervised. Responsibility for this coordination rests with the Poppy Advisory and Control Board.

Figure 1: Tasmanian Poppy Production by Statistical Division



Source: ABS 7125.0

## Current and alternative market for Tasmanian poppies

The US is the world's largest market for narcotic raw material, yet it also the most restricted. For historical reasons the US sources 80 per cent of its narcotic raw material from the traditional producing countries, India and Turkey. As well as having guaranteed access to this large share of the US market, the subsidised, state controlled industries of India and Turkey compete with the rest of the world for the remaining 20 per cent of the market.

Despite these obstacles the Tasmanian poppy industry has managed to maintain a 40 per cent share of the world market for pharmaceutical pain management material. This world leadership position is due, in part, to innovative breeding programs that have delivered a number of new varieties. Thebaine is the most commonly grown of these new varieties. Thebaine is an alkaloid that can be derived from the Morphine variety during processing. However, plant breeding has enabled Thebaine-producing poppies to be harvested directly from the field. Breeding programs have also produced other new varieties of poppy including Noscapine, Oripavine and Codeine.

Only around 50 per cent of the Tasmanian poppy crop is now planted to Morphine-producing varieties, compared to 70 per cent in other producing countries. The remainder of Tasmania's poppy crop is planted to Thebaine and smaller amounts of the other new varieties.

## Trends in consumer behaviour

At present only 13 per cent of the world's population has access to opiate-based pain management. Cultural barriers in developed countries, such as Italy and Japan, are responsible for some of this shortfall, yet growth in the developing world will play the largest part in closing this gap. As

developing countries become more affluent and their spending on healthcare increases, world demand for opiate-based pain management will rise.

These factors, together with aging populations and greater expenditure on healthcare in the developed world, has seen growth in the demand for Morphine narcotic raw material increase at 2 – 3 per cent annually over the last decade. Growth in demand for Thebaine over the same period has been more spectacular, increasing 8 – 10 per cent each year. As these trends continue the demand for opiate-based pain management is likely to continue increasing.

### Price trends and future market outlook

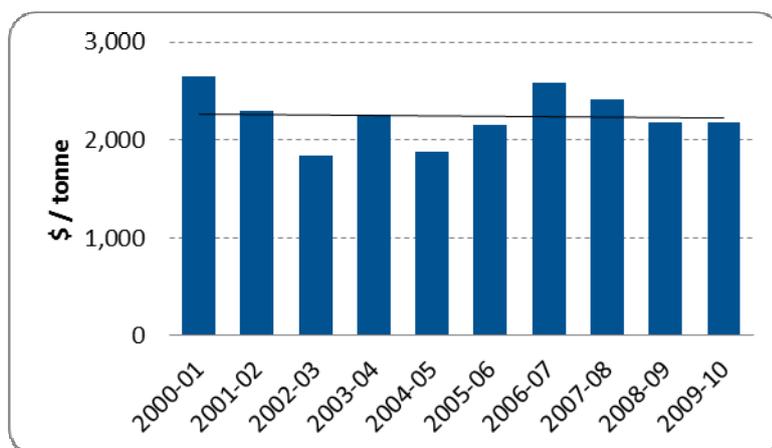
Between 2003 and 2006 the world market for narcotic raw materials was over supplied, depressing prices (Figure 2) and leading to a reduction in the area sown to poppies worldwide. Since 2007, world supply has been more in line with demand yet the narcotic raw material price has remained soft, along with the price paid to farmers. Despite the slow pace of price growth, area under production has again started to increase.

The price Tasmanian farmers receive for poppy production is largely offset by the high cost of production relative to suppliers in other low-cost countries. Costs associated with the management of weed pressure are particularly high, making it difficult for the Tasmanian industry to compete internationally.

Future new varieties may have a role to play in reducing the use of sprays used for weed control. Table 1 illustrates the impact a reduction in spray costs would have on the gross margin for poppies. In this example a 25 - 50 per cent reduction in spray costs would result in the gross margin increasing by 5 – 10 per cent, effectively offsetting a price reduction of 2 – 4 per cent.

A reduction in the use of farm chemicals through new varieties would further result in positive environmental benefits, improvements in farm workplace health and safety as well as giving the Tasmanian poppy industry a competitive edge in the world market.

Figure 2: Poppy Farm-Gate Price Trend



**Note:** This price trend is relevant to Thebaine varieties and has been presented for illustrative purposes only. Caution should be used when interpreting this trend due to the payment structure used and due to changes in alkaloid content that have occurred over time. Furthermore, year on year and paddock to paddock variations in yield and alkaloid content will impact grower returns.

Table 1: Potential Impact of a Reduction of Spray Costs on the Poppy Gross Margin

	Current Use		-25%		-50%	
<b>Income</b>	\$	4,800	\$	4,800	\$	4,800
<b>Variable Cost</b>	\$	2,800	\$	2,700	\$	2,600
<b>Gross Margin</b>	\$	2,000	\$	2,100	\$	2,200
		-		5.0%		10.0%

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Last updated October 2011

