

Tasmanian Alkaloids

Nestled near the historic town of Westbury in the state's north, Tasmanian Alkaloids is an excellent example of integration between technology and the rural environment.

Tasmanian Alkaloids is recognised as the largest manufacturer of active pharmaceutical ingredients in Australia and is the largest exporter of codeine and thebaine in the world.

The company employs over 200 people including scientists, engineers, technicians, operators, tradespeople and administrative support. The team also includes farmers; contracted for the production of the annual poppy crops, and field officers who work closely with farmers throughout the year to ensure top quality harvest results.

Poppies are grown on a three-year crop rotation cycle. Sowing is in spring (September), flowering in early summer (December) and harvest in mid-summer (February). Following harvest, the poppy seed is separated and sold in a clean, natural condition for the spice trade.

Separated poppy straw, containing alkaloids, enters the extraction facility where the alkaloids are removed from the plant material by a warm solvent percolation system. The final product is called Concentrate of Poppy Straw.

Tasmanian Alkaloids produces two types of Concentrate of Poppy Straw; one has as its main component morphine, the other main component is thebaine.

Morphine is converted into codeine. Thebaine is converted into a range of strong analgesics such as oxycodone and buprenorphine.

Agricultural Research Scientist Dr James Miller said that his team was working to better understand alkaloid production by the poppy plant in order to maximise the content of the required alkaloids in commercial crops. New technologies



Poppy crop Papaver somniferum.

are employed wherever possible to maximise the crop improvement program. In addition to research into poppy genetics and breeding methods, work is undertaken on crop nutrition, crop husbandry and crop protection.

Processes are investigated in detail to define robust and capable manufacturing procedures which consistently deliver products with tightly defined and controlled quality characteristics. A dedicated KiloLab facility ensures smooth scale-up from the R&D laboratory to the manufacturing facility where the process is validated and locked-in.

Tasmanian Alkaloids' strategy for the development of new products and their desire to remain an innovative market force is realised by working closely with their customers and partners.