focus on

WATTLE SEED

Acacia victoriae

Part of an R&D program managed by the Rural Industries Research and Development Corporation

Overview

While there are hundreds of species of wattle found in Australia, few have the intensity of flavour and large, easily processed seed of the elegant wattle, which is the most commonly used for commercial purposes. Other species with good potential include Acacia murrayana, pycnantha, retinodes, rivalis, saligna, microbotrya and jennerae (Maslin et al 1999).

The flowers of this evergreen, multi-stemmed tree are cream coloured and occur from August to December, depending on the growing area. The round seeds mature between November and January and are borne in papery, oblong pods on the outside of the tree canopy.

Wattles grow all over Australia and are harvested both commercially and in the wild.

Wattle seed has been a mainstay in the diet of Indigenous Australians for more than 40000 years. It can survive tough weather conditions, so was a valuable source of protein and carbohydrates when other food sources were scarce. The women would collect the ripe pods, then parch the seeds with fire before grinding them to a flour consistency to be mixed with water and made into cakes.

Today, wattle seed is primarily used as a flavour enhancer. The roasted and ground seed is used to flavour breads, muffins, desserts, muesli and pancake batter. The essence is used to flavour sauces and even beer and ales. Wattleseed is also used in cosmetics as an exfoliant.

Wattleseed has a low glycaemic index, high levels of protein and has recently been analysed as a good source of magnesium, zinc, calcium, iron and selenium.

The most popular wattle seed in the food industry is Acacia victoriae, or elegant wattle, which has a broad geographic range throughout the Central Desert region and into South Australia, Western Australia and New South Wales.

Wild harvest remains a key source of supply, with hundreds of Aboriginal women from communities across South Australia and the Northern Territory participating in the industry, as well individuals on private land.

Cultivation has increased over the past decade, particularly around the Riverland, SA; the western districts of Victoria; and Junee in NSW. It’s estimated some four tonnes per annum are produced from plantations.

The low costs of production and high value of wattle seed suggest there is potential for production to be a profitable farming alternative, if it can transition from the boutique to mainstream market. Typically, wattle seed growers currently use it to diversify or as an additional income stream in times of drought.
Growing conditions
Elegant wattle likes hot, low rainfall areas on a broad range of soil types, and is a very resilient and adaptable species as well as being salt and drought tolerant. It is important to note there can be large variation between individual trees.

Wattles require little water compared to many introduced crops, although the volume of wild harvest wattle seed can vary considerably depending on environmental conditions. Yields can be higher with irrigation, but even under cultivation damage can be caused by bushfires, high winds, heavy rain and hail.

The species is used for the mitigation of dryland salinity and in mine rehabilitation, creating both competition for seed and opportunities for additional supply.

Wattles grow easily from seed, although need to be soaked in just-off-boiling water before planting due to the hard outer seed case.

Harvesting
Harvesting of wattle seed occurs during the summer months.

Whether cultivated or wild harvested, the seeds are mostly collected by hitting the trees with sticks. Some growers do operate mechanical tree shakers that use vibration to release the pods.

The seed is then separated from the twigs and leaves, before threshing and sieving to clean and prepare it for commercial sale.

While wattle seed yields can vary considerably, the seed has a shelf-life of up to ten years, which helps to even out supply.

Food Uses
Once wattle seed is harvested it is usually roasted and can be ground or sold whole. Roasting the seeds brings out the nutty flavour and if roasted longer it produces a chicory flavour.

Described as the ‘unsung hero’ of the Australian Native Food Industry, it is a very versatile food ingredient which can be used in a number of sweet and savoury products, from ice cream and cakes to casseroles and curries.

Some distributors are marketing the roasted seeds as a caffeine-free coffee alternative, with wattle seed cappuccino becoming popular in parts of Australia.

The extracted essence from the roasted wattle seed is used as a flavour enhancer in a range of products such as balsamic vinegar, and even in beer and ales. Varieties of wattle seed-flavoured beer have won awards in the International Beer Awards held in Melbourne.

Health benefits
Wattle seed is a rich source of protein and since the 1970s some species have been grown in Africa to provide a food and fuel source to drought-affected populations. This has been well integrated and is successful, with trees producing heavy seed crops within two years of planting.

Wattle seed has been certified as a low glycaemic index (GI) food. Low GI foods have been shown to be beneficial for diabetics as the slow release of sugars does not produce sudden rises in blood glucose levels.

Other uses
The proteins contained in wattle seed have excellent emulsifying and emulsion stabilisation properties which could potentially be exploited in processed foods.
NUTRITIONAL INFORMATION

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<th>(per 100 grams dry weight)</th>
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<tr>
<td>Energy 1183 KJ</td>
<td>Zinc (Zn) 3.05 mg</td>
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<tr>
<td>H2O 17 g</td>
<td>Magnesium (Mg) 2551 mg</td>
</tr>
<tr>
<td>Protein 20.3 g</td>
<td>Calcium (Ca) 434.4 mg</td>
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<tr>
<td>Total fat 61 g</td>
<td>Iron (Fe) 10.90 mg</td>
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<tr>
<td>Total saturated fatty acids</td>
<td>Selenium (Se) 31.7 µg</td>
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<tr>
<td>Carbohydrates 10.5 g</td>
<td>Phosphorus (P) 227.5 mg</td>
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<tr>
<td>Sugar (total)</td>
<td>Sodium (Na) 43.90 mg</td>
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<tr>
<td>Fibre 54.2 g</td>
<td>Potassium (K) 1147.6 mg</td>
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<tr>
<td></td>
<td>Manganese (Mn) 2955 mg</td>
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<tr>
<td></td>
<td>Copper (Cu) 0.836 mg</td>
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<tr>
<td></td>
<td>Molybdenum (Mo) 25.1 µg</td>
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<td>K : Na 26.1</td>
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For more information

This fact sheet is one of a series summarising Native Foods R&D from 2007 to 2012. In a partnership between government and industry, the Rural Industries Research and Development Corporation (RIRDC) and Australian Native Food Industry Limited (ANFIL) are working towards an innovative, profitable and sustainable Native Foods industry.

Old Aboriginal grinding stone with black wattle seeds (left) and ground (right)

Australian Native Food Industry Limited (ANFIL) was formed in 2006 and is the peak national body which represents all interests in the rapidly growing Australian native food industry. ANFIL has taken the lead in working with industry, governments and other organisations to determine and prioritise research and market development strategies to progress the industry.

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The Rural Industries Research & Development Corporation (RIRDC) is a statutory authority established to work with industry to invest in research and development for a more profitable, sustainable and dynamic rural sector.

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