



NORTHERN

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GRAINS RESEARCH
& DEVELOPMENT
CORPORATION

PEANUTS

SECTION A

INTRODUCTION

AGRONOMY AT A GLANCE | CROP OVERVIEW | EXECUTIVE SUMMARY

MORE INFORMATION

A general summary of the Australian grain growing regions is available at [A Greijdenus, M Kragt \(2014\) The grains industry: An overview of the Australian broad-acre cropping](#)

[Agronomy packages take on northern pulse challenge](#)

Introduction

A.1 Agronomy at a glance

- Returns for peanuts depend on yield and quality. Best returns are obtained under reliable rainfall or irrigation with intensive management. Most types of irrigation can be used, including sprinkler systems and furrow irrigation. Successful furrow irrigation requires good land levels and raised beds.
- Peanuts prefer sands, sandy loams and light clay loams (Photo 1); pod losses can be high in heavy or sticky soils.
- In high risk areas, all new paddocks must be assessed for pesticide and heavy metal residues prior to planting.
- Planting usually occurs from October to January in Queensland and New South Wales (NSW). In the Northern Territory, winter plantings occur in March–April, while summer plantings are also possible from October–January. Crops take about 5 months to grow; however, early-maturing varieties taking about 4 months to grow are also available. Planting should be timed so that harvesting is conducted in relatively dry conditions.
- The minimum soil temperature required for germination is 18°C, measured at 50 mm depth at 9 a.m.
- The crop's maturity is assessed to determine harvesting time. Harvesting is a two-part operation. First, the taproot is cut and the plant shoots and peanut pods are inverted to partially dry in the field for several days before a separate threshing operation is done.
- Optimum threshing occurs at a pod moisture content of 12–16%. Controlled drying brings the peanuts slowly to a safe storage moisture content and ensures optimum quality. Extended periods of paddock drying can cause higher losses, more splits, poorer quality and increased risk of rain damage.
- Peanuts should form part of a sustainable farming system in rotation with a grass or cereal crop.¹

¹ PCA. Are you interested in growing peanuts? Peanut Company of Australia, <http://www.pca.com.au/interested-in-growing-peanuts/>

i MORE INFORMATION

Are you interested in growing peanuts?



Photo 1: Growers are advised to research best practice management to maximise peanut production.

Photo: Graeme Wright, PCA)

A.2 Crop overview

The peanut or groundnut (*Arachis hypogaea*) is an annual legume crop originating from South America. Peanuts grow on a small bush or vine. The crop takes 4–6 months to grow, depending on the variety and region planted.

The Australian peanut industry has about 160 growers including North, Central and southern Queensland, and northern NSW (Figure 1).

Australia produces about 40,000 tonnes (t) of farmer stock peanuts annually, which represents only about 0.2% of the world’s peanut production. More than 90% of Australia’s peanuts are grown in Queensland. The industry is based on the large-seeded Virginia varieties and medium to large seeded Runner varieties. Plantings are ~one-third Virginia and two-thirds Runner types. Some new ultra-early varieties with Runner-type kernels are also planted.

The size of the domestic market for peanuts is ~50,000 t of pods annually.

Australia is one of the few peanut-producing countries where imports are freely permitted. The price that growers receive for their crop is therefore significantly influenced by world prices.²

An ‘off’ flavour problem was detected in peanuts from North Queensland’s Tolga region in 2008 and 2009. The cost to the Australian peanut industry was more than \$1 million in downgraded product. This musty, earthy taste had never been detected in peanuts anywhere, and Australian peanut exports were affected.

The exact cause of the taste has yet to be confirmed, but changes resulting from research supported by the Grains Research and Development Corporation (GRDC) to the way peanuts are delivered, shelled and stored appear to have largely resolved the issue.

A raft of changes were implemented in response to the problem, including a 0.5% lower kernel moisture content at delivery, and better overall harvesting management

² G Wright, L Wieck, P Harden (2015) Peanut production guide, August 2015. Peanut Company of Australia, <http://www.pca.com.au/wp-content/uploads/2016/11/PWH-Peanut-Production-Guide-2015.pdf>

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on-farm have reduced the severity of the problem. The GRDC-funded study has wider implications for farmers in northern Queensland, because the growing of potatoes and peanuts in rotation could also be a factor.³



Figure 1: Peanut production areas of Australia. (Note, there is no current production in the Ord region.)

MORE INFORMATION

[2017 Australian Nut Conference](#)

VIDEOS

[GCTV14: Coastal Grower Solutions Group](#)



A.3 Executive summary

Peanuts are a robust and drought-tolerant plant, but they will not return a healthy profit to the grower unless they receive adequate water and nutrition, and protection from weeds and diseases. Growers are paid on the weight and quality of peanut kernels.

Peanuts can be grown on a wide range of soils, provided the surface soil (the top 15–20 cm) is reasonably friable. Suitable soil types include sands, sandy loams and silty loams. In Australia, peanuts have traditionally been grown as high-value crops on the red clay loams (Krasnozems) of the South Burnett and Atherton Tableland in Queensland. Peanuts can be grown in a wide range of tropical and sub-tropical environments in Australia, and contribute favorably as a nitrogen (N)-fixer in rotation with sugarcane, cotton and cereals.

The GRDC also supports the peanut industry by funding research and extension projects.⁴

³ C Collis (2012) Peanuts back in flavour but mystery lingers. Ground Cover, Issue 97, March–April 2012. GRDC. <http://www.grdc.com.au/Media-Centre/Ground-Cover/Ground-Cover-Issue-97-March-April-2012/Peanuts-back-in-flavour-but-mystery-lingers>

⁴ GRDC (2013) Peanut off-flavour. GRDC Fact Sheet, www.grdc.com.au/GRDC-FS-PeanutOffflavour