

# MIDDLETON



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## 1. Type

- Middleton is a high oleic Virginia type peanut developed at the Queensland Department of Employment, Economic Development and Innovation (DEEDI), Kingaroy and the Grains Research and Development Corporation (GRDC). It yields well under dryland conditions, a production area which this variety has been specifically bred for. Recent trial and commercial production has also shown it has good yield potential under irrigation in Southern and Central Queensland.

## 2. Growth Habit

- The growth habit of Middleton is considered to be semi-prostrate and more comparable to Holt than Wheeler. It also has excellent compensating abilities.
- Leaf colour and canopy structure is similar to Holt.
- Middleton is less determinate than Wheeler regarding pod set.

## 3. Seed / Pod Characteristics

- Middleton's shell is thinner than Wheeler. This aids drying within the windrow. Thin shell is also one physiological trait thought to be closely associated to reducing the risk of aflatoxin.
- Kernels are pink in colour and are more elongated in shape compared to Wheeler.
- Pods produced by Middleton have a distinct beak.

## 4. General Agronomy

### a) Yield

- Middleton has proven itself to be a high yielding variety both in irrigated and rain-fed environments.

### b) Planning to Grow Middleton

- Middleton would be suitable to grow in most areas with the exception of areas where high foliar disease pressure is generally expected.

### c) Planting Rate

*These rates are based on using Enhanced Seed with a Precision Planter*

	Dryland (Sth Qld)	Irrigated (Sth Qld)
Seeds / ha	80,000	130,000 – 150,000 Max.
Seeds / metre		
⇒ 92 cm rows (36")	7.3	12 – 14
⇒ 101 cm rows (40")	8.1	13 – 15
Seed spacing		
⇒ 92 cm rows (36")	13.7cm (5.4")	8.3 – 7.1cm (3.3" – 2.8")
⇒ 101 cm rows (40")	12.3cm (4.8")	7.7 – 6.7cm (3.0" – 2.6")

**d) Nutrition**

- The nutritional requirement of Middleton is similar to other current commercial varieties.
- Requirements for Calcium and Boron are high. Marginal levels of available Calcium and Boron in the podding zone will result in an increase in the number of pops, splits and also increase the amount of hollow hearts.
- **PCA recommends soil testing and consultation with peanut agronomists to determine both the timing and application rates of Calcium and Boron.**

**e) Disease Susceptibility**

- Middleton has some CBR tolerance, similar to Wheeler. Middleton is highly susceptible to all the foliar diseases. Middleton is regarded as being a very efficient variety, having a very high partitioning trait. To realize these benefits a preventative spray program should be implemented to ensure foliar disease does not limit yield.

**f) Maturity and Harvesting**

- Time to maturity is approximately 135 days, being slightly earlier than Wheeler.
- The relatively quick dry down of Middleton pods in the windrow compared to Wheeler and most Runners requires close attention by growers to ensure that threshing occurs at an adequate NIS (nut in shell) moisture content, in order to minimise splits.

**5. Marketing**

- Middleton is suited to the snack food and manufacturing markets.
- Middleton is not suited to the in-shell market, owing to its beaked trait on pods.
- Taste profile is similar to other varieties.

**6. Grades**

<b>Grade (%)</b>	<b>Wheeler</b>	<b>Middleton</b>	<b>Fisher</b>
J	14	10	32
1	21	23	15
2	18	20	11
Splits (5)	12	12	12
MFG (7)	3	4	1
Oil	8	8	6
Shell	24	23	23

The table above illustrates comparative grades (%) against Wheeler. Results can vary considerably with management and seasonal conditions.

\* These data averages are based on commercial production.

*For more information regarding PBR please contact PCA on 07 4162 6311.*