

## High Grain Quality Improved Halo Blight Resistance

### MAIN ADVANTAGES

Celera II-AU<sup>Ⓢ</sup> is a small seeded shiny mungbean variety that combines the superior quality of Celera, preferred by the small seeded market, with the best available halo blight resistance. It has been released as a direct replacement for the 2 small seeded varieties Green Diamond<sup>Ⓢ</sup> and Celera.

Small shiny green mungbean has a limited market volume and growers are advised to consult their marketer prior to planting. They are grown for niche markets in many European and Asian countries and some splitters and millers also prefer them.

Celera II-AU<sup>Ⓢ</sup> has the best available resistance to halo blight (Moderately Resistant [MR]) and offers greater yield stability under high disease pressure. Its reaction to powdery mildew and tan spot is Susceptible (MS) and Moderately Susceptible (MS) respectively.

**Table 1: Disease resistance of Australian small shiny mungbean varieties**

Variety	Powdery mildew	Tan spot	Halo blight
<b>Celera II-AU<sup>Ⓢ</sup></b>	<b>S</b>	<b>MS</b>	<b>MR</b>
Celera	S	MS	S
Green Diamond <sup>Ⓢ</sup>	MS	S	S

Not all diseases will be seen in mungbean crops in a region every year. The distribution, incidence and severity of disease depends on the interaction between the pathogen, the host, the environment (including weather, soil conditions and agronomic practices), and vectors in the case of viruses.

### SEED PROTECTION & ROYALTIES

Celera II-AU<sup>Ⓢ</sup> is protected under Plant Breeder's Rights (PBR) legislation. Growers can only retain seed from their production of Celera II-AU<sup>Ⓢ</sup> for their own use.

A Seed Royalty, which includes breeder royalties, applies at the point of sale. This royalty helps to fund the National Mungbean Improvement Program and is re-invested in research to develop future mungbean varieties.

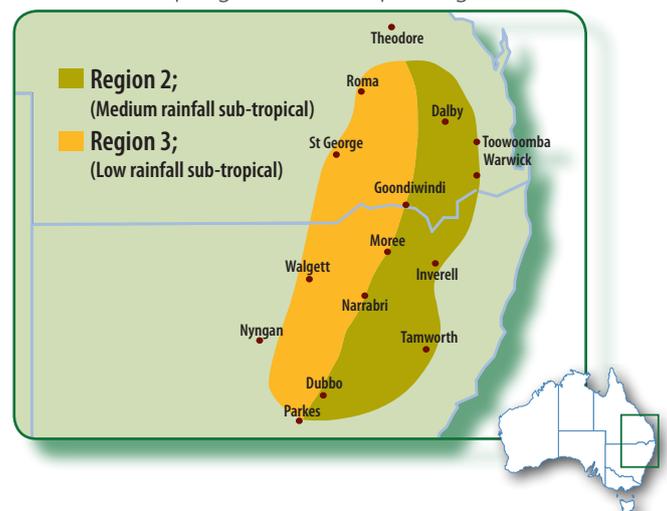
### KEY FEATURES

- **Celera II-AU<sup>Ⓢ</sup> is a small seeded shiny mungbean with a limited market size. It is a direct replacement for Green Diamond<sup>Ⓢ</sup> and Celera.**
  - Growers are advised to consult their marketer before planting.
- **Celera II-AU<sup>Ⓢ</sup> has shown equivalent yields to Green Diamond<sup>Ⓢ</sup> in disease free situations, in northern New South Wales and southern Queensland.**
- **Celera II-AU<sup>Ⓢ</sup> has significantly improved halo blight resistance, compared to all current varieties.**
  - Under high halo blight disease pressure Celera II-AU<sup>Ⓢ</sup> out performs all current varieties.

### AREA OF ADAPTATION

Small seeded shiny green mungbean types are best adapted to the production areas of northern New South Wales and southern Queensland.

Celera II-AU<sup>Ⓢ</sup> provides equivalent yields to Green Diamond<sup>Ⓢ</sup> in these regions under disease free conditions and greater yield stability under high halo blight disease pressure. It is suitable for both spring and summer planting.



## AGRONOMIC TRAITS

Celera II-AU<sup>®</sup> has similar agronomic traits to Green Diamond<sup>®</sup> and Celera. The following data for key agronomic traits shows that small seeded types are:

- 3 - 5 days earlier flowering than Crystal<sup>®</sup>
- 7 - 10 days earlier maturity than Crystal<sup>®</sup>
- 5 - 10 cm shorter in plant height than Crystal<sup>®</sup>
- More susceptible to logging under high yield potentials than Crystal<sup>®</sup>.

## DISEASE SUMMARY

Celera II-AU<sup>®</sup> has in comparison to other current varieties:

- Significantly improved halo blight resistance (MR)
- Improved tan spot resistance (MS)
- Comparable powdery mildew resistance (S).

Resistant varieties are one part of effective integrated disease management. High quality, clean planting seed remains the cornerstone of mungbean disease management.

## HARVEST

Celera II-AU<sup>®</sup> has earlier maturity than all current mungbean varieties and the transition to black pods occurs faster than other varieties. Timely observation, desiccation and harvest management is critical for this variety.

## GRAIN QUALITY

Celera II-AU<sup>®</sup> is well suited to existing small seeded mungbean markets with grain size and visual quality equivalent to Green Diamond<sup>®</sup>. Celera II-AU<sup>®</sup> has the lowest hard seed levels of all currently available small seeded lines.

## MARKETING

Celera II-AU<sup>®</sup> is a niche variety with a limited market size; growers are advised to consult their marketer before planting. Over production could easily fill current market needs and put downward pressure on price.



Celera II-AU<sup>®</sup>



Jade-AU<sup>®</sup>

## BREEDING

The National Mungbean Improvement Program is led by Department of Agriculture, Fisheries and Forestry Queensland (DAFF) in partnership with the Grains Research and Development Corporation (GRDC) and the Australian Mungbean Association (AMA).

Celera II-AU<sup>®</sup> (evaluated as M09246) is a cross between M773 and OAEM58-62. Both parents have been identified as having useful levels of halo blight resistance.

## ENQUIRIES

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## AMA APPROVED SEED

Only purchase seed that is clearly labelled as AMA Approved Seed.

This seed has been harvested from dedicated seed crops that have been inspected to ensure minimal risk of the seed borne diseases tan spot and halo blight.

It is available from your local AMA member or seed re-seller.

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