

# Tropical Pulses for Queensland



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# What are Pulses?



Chickpeas



Field peas



Kidney beans



Lentils



Mungbeans



Lupines



Cowpeas



Faba beans



Black-eyed



Pulses = Legumes  
with dry, edible  
seeds

# Chickpea and Mungbean – Two Important Pulses for Queensland



## Chickpea (*Cicer arietinum*)

- Nutrient dense, good source of carbohydrates, minerals, protein (constituting 80% of the total dry seed mass)



## Mungbean (*Vigna radiata*)

- It is regarded as a 'green pearl' due to high micro-nutrient content (Fe, Zn, Ca) and vitamins
- Good source of easily digestible proteins and essential amino acid lysine





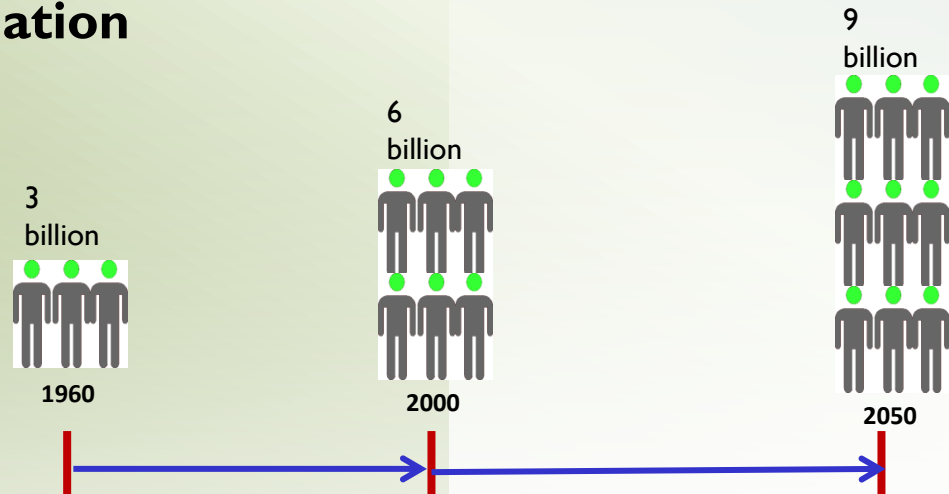
# Pulses – Key Facts

- Rich in protein
- High fibre content
- Low fat content
- Good sources of vitamins e.g. folate
- Gluten free
- Rich in micronutrients e.g. Fe and Zn



# Global challenge to Sustain an Increasing Population

## World population



Food production

Doubled

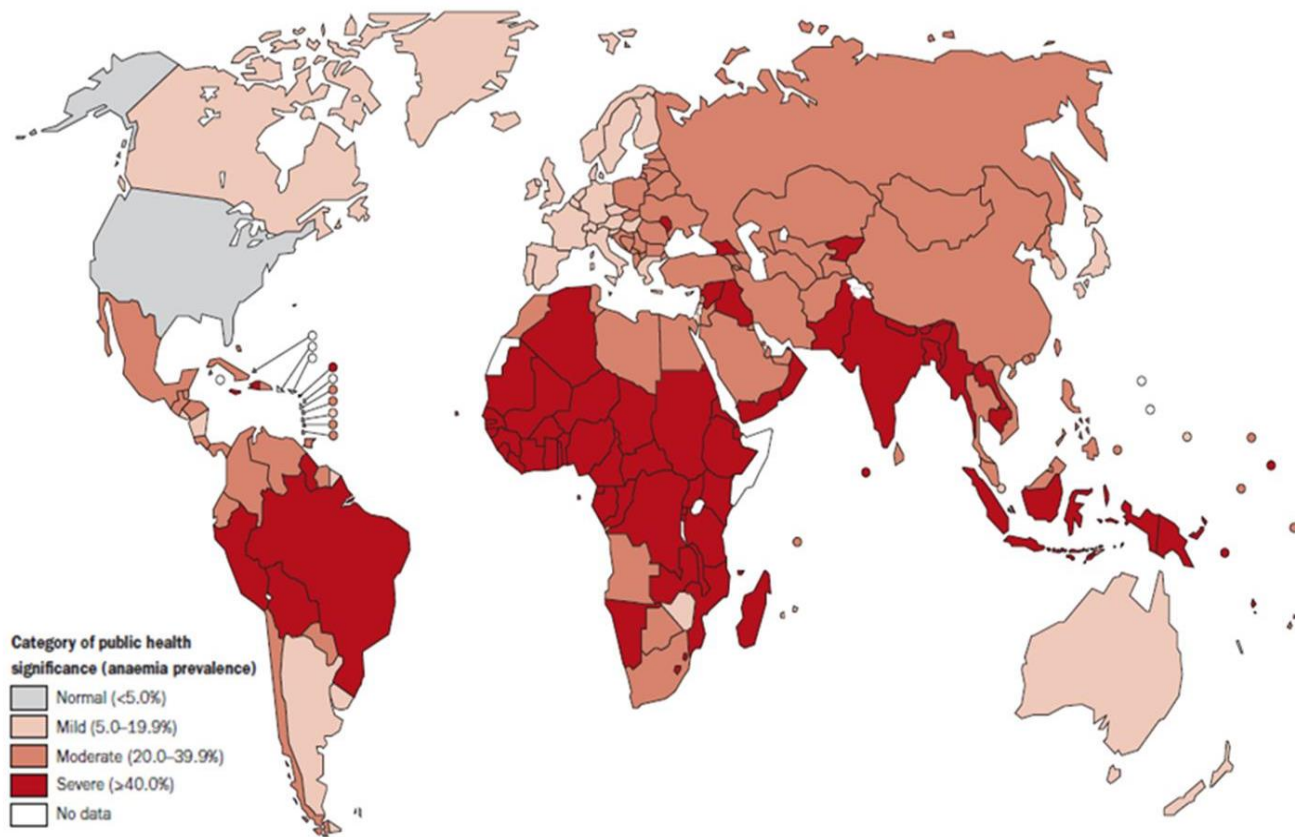
Required increase by 70%

# Iron Deficiency: The Implications

- Poor **pregnancy** outcomes
  - Altered physical and cognitive **development**
  - Impaired **immunity**
  - Increased **morbidity**
- Long and short term socio-economic implications
    - Loss of **productivity**
    - Increased **healthcare costs**







# Generation of Elite Chickpea Varieties that accumulate more Iron



Transformation and  
Regeneration

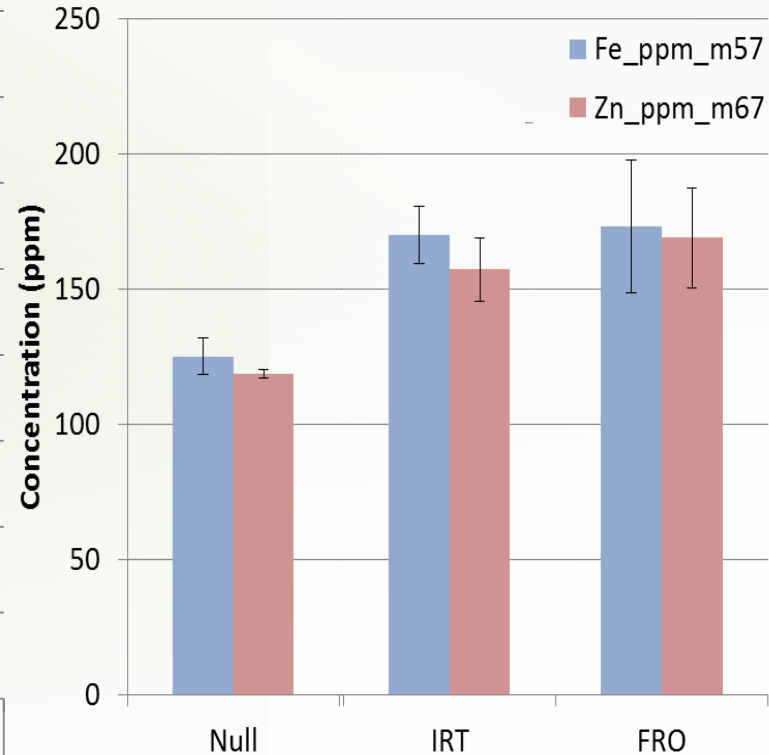
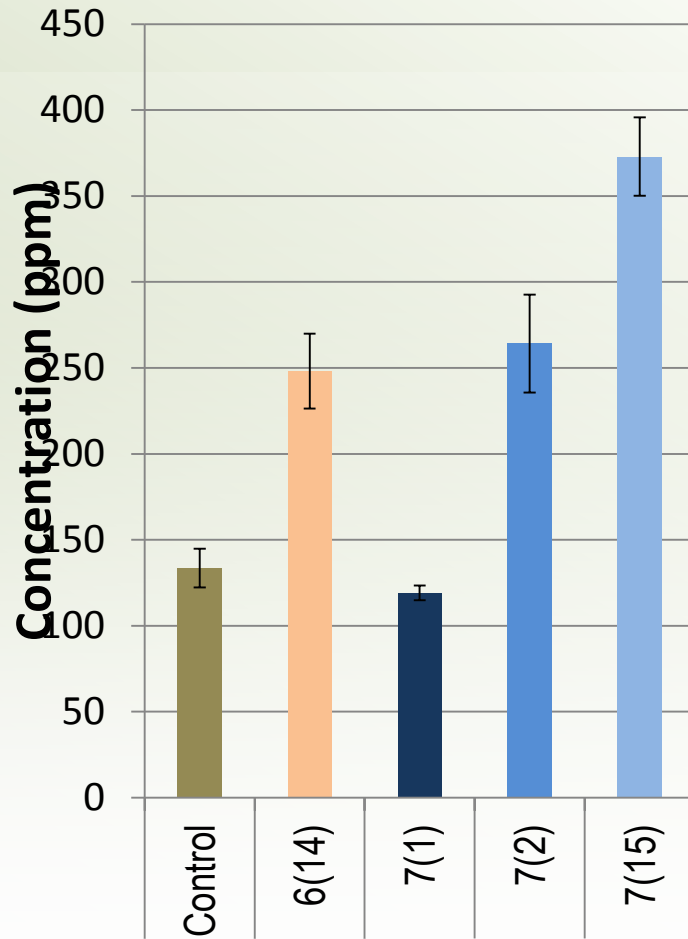


*In vitro* grafting



Post-acclimatisation

# Transgenic Chickpea accumulate more Iron



# Allergies on the Rise

- Food allergies are emerging as a prominent concern in global health statistics.
- 1 in 20 Australian school children suffer from a food allergy (Allergy and Anaphylaxis Australia)
- Australia has a relatively high prevalence of peanut allergy. Almost 3 in every 100 children have a peanut allergy (Allergy and Anaphylaxis Australia)
- The Australian Society of Clinical Immunology and Allergy estimate the cost of allergy related illness to Australians is estimated at \$21.5bn, a large portion of which is attributed to food allergy related incidences.

# Responding To Market Demand

Foods from the Earth have launched their Notnuts spreadable paste range comprising of:

- Notnuts Smooth Butter
- Notnuts Sugar Reduced Butter
- Notnuts Chocolate Spread
- Notnuts Crunchy Butter



safe, tasty alternatives to traditional nut spreads  
equally at home in retail or as an ingredient

An advertisement for Notnuts spreadable paste. The top section has a green background with the Notnuts logo and the tagline "Safe, tasty alternatives to nut spreads". A circular badge on the right says "FREE FROM Nuts, Gluten, Soy Great for school lunches!". Below this is a photo of a smiling woman and four children sitting at a table. In front of them are four jars of Notnuts spreadable paste and a cartoon character of a green nut with a face and arms. The bottom section has a green background with the text "An exciting new taste for an ancient superfood!" and a description of the product. A white box on the right says "Protein boost for savoury meals, power shakes or wraps". At the bottom, there is a "Find us on" link with a Facebook icon, and contact information for local retailers and the website.

**Notnuts.**  
Safe, tasty alternatives to nut spreads

FREE FROM  
Nuts, Gluten, Soy  
Great for school  
lunches!

An exciting new taste for an ancient superfood!

The Notnuts range delivers nut free, tasty and safe alternatives to traditional nut spreads, using Australian Mungbean as a core ingredient.

Why does it taste so good? Our patented, chemical-free process accentuates the natural nutty flavour of Mungbean and maintains the nutritional integrity of this powerhouse food.

Protein boost for savoury meals, power shakes or wraps

Find us on

**Foods from the Earth** Please ask your local retailer or visit our website to find a stockist near you. Online shop open!  
[www.foodsfromtheearth.com.au](http://www.foodsfromtheearth.com.au) T+61733638400

# Dynamic research team across multiple organisations



**Queensland Government**  
**Department of Agriculture and Fisheries**



A close-up photograph of a person's hands gently cupping a small, realistic globe of the Earth. The globe shows blue oceans, green landmasses, and white clouds. The person is wearing a white t-shirt, and the background is a soft, out-of-focus light blue. A semi-transparent yellow rectangular box is centered over the globe, containing the text "Thank You" in a bold, black, sans-serif font.

**Thank You**