



**Plant & Food  
Research**  
Rangahau Ahumāra Kai

# A smart green future and climate resilience underpinning breeding programmes

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# Agenda



- Introduction to Plant & Food Research
- Challenge: it's a time of crisis (global warming), change and uncertainty
- Our response: climate resilience underpinning breeding programmes
  - Breeding strategies
  - Plant Variety Intellectual Property
- UPOV's opportunity



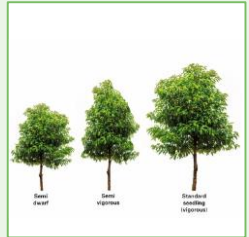


A smart  
green  
future.  
Together.

## Our mission

To create the world's  
most sustainable food  
production systems





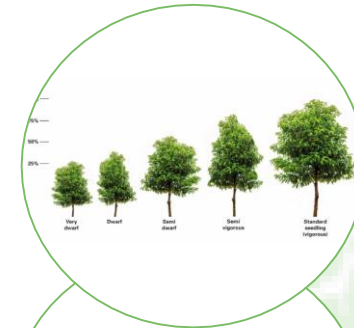
New plant cultivars

**Our cultivars are  
grown in more than  
30 countries worldwide**

- **Zespri™ Red Kiwifruit**
- **Wake® raspberries**
- **Envy™ apples**
- **'Moonlight' potatoes**
- **'Conquest' wheat**



# A smart green future. Together.



# Global challenges



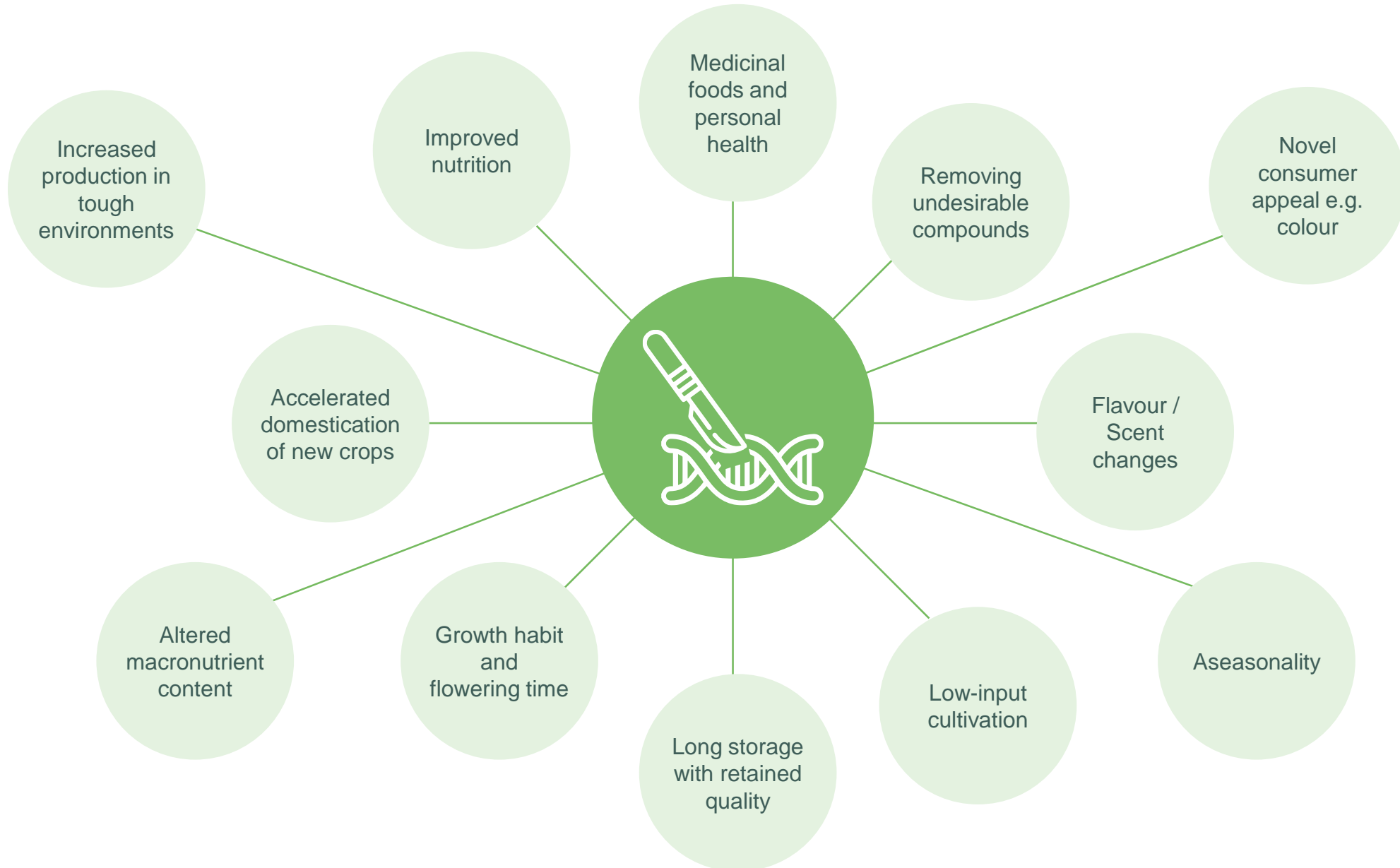
# Applied research is revealing the molecular basis of commercial traits and creating tools for breeders to deliver better cultivars faster

- Gene identification, sequencing and mapping
- Gene function and pathway analysis
- Nutrition, consumer appeal, pest and stress tolerances
- Marker-assisted and whole-genome selection
- Gene editing





# Potential for new breeding techniques & technologies



# Plant Variety Intellectual Property Strategy



- Where will the variety be:
  - propagated
  - cultivated
  - harvested material sold
  - at risk without PVR
- Legislative protection:
  - PVR
    - UPOV91
    - UPOV78
    - Sui generis
  - Trade mark



# Plant Variety Intellectual Property Strategy - evolution

- New countries for new crops at the new pace
  - Plant material logistics
  - Allowing sufficient time for trials & evaluations in new regions and countries
  - Novelty triggering events balanced with the need to evaluate
  - Interspecific hybrids
  - Planning ahead – rapid climate change, new production regions
- New growing methods
  - morphological / phenotypic traits that may express differently in different production models



A smart  
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Together.



Together, we need **greater investment in more radical innovation** in breeding strategies.

Together, Plant & Food Research – with our customers & partners – is **embracing this opportunity**.

Together, we are all on the same journey.

**UPOV's opportunity** ensure Intellectual Property legislation keeps pace at the Convention and at national implementation levels.





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# Thank you

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