



# AGRO- PROCESSING CAPABILITIES



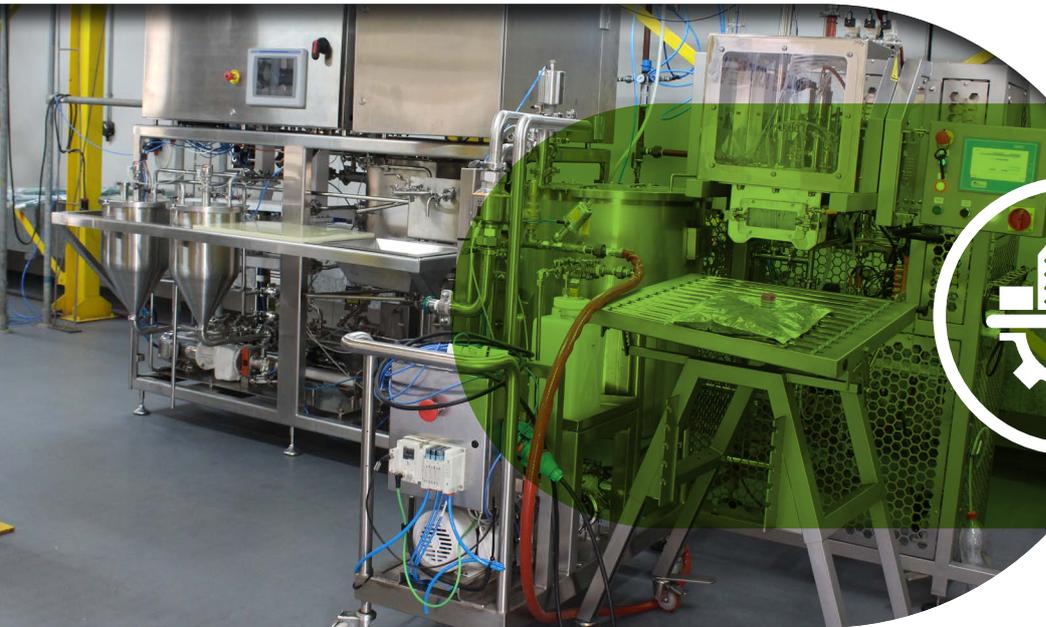
science, technology  
& innovation

Department:  
Science, Technology and Innovation  
REPUBLIC OF SOUTH AFRICA



# CSIR

Touching lives through innovation



The CSIR's agro-processing research group offers integrated access to specialised research and development components, including scale-up facilities, well-equipped characterisation laboratories and multi-disciplinary researchers.

Our pilot-scale facilities are designed to enable the transition from laboratory to industrial scale, thus facilitating the industrialisation of high-value products and green technologies.

### **OUR KEY FOCUS AREAS:**

- **Optimisation of South Africa's biodiversity:** We develop high-value products such as food, cosmetics, nutraceuticals and African traditional medicines using indigenous plants.
- **Nutrient-rich food development:** Ready-to-eat foods enriched with plant or insect-based proteins.
- **Post-harvest loss reduction and waste valorisation:** We develop green solutions for post-harvest management and waste valorisation. CSIR researchers have developed technologies to transform food waste into highly nutrient-rich biocompost, providing a sustainable alternative to chemical fertilisers. The focus is on shelf-life extension for perishable produce using advanced preservation and aseptic processing techniques.
- **Cannabis and hemp industry support:** Providing product and processing solutions, including extraction and analytical testing.

## OUR AGRO-PROCESSING INFRASTRUCTURE AND CAPABILITIES

Our infrastructure comprises state-of-the-art processing and characterisation laboratories along with specialised units which include:

- **Microwave processing unit:** South Africa's first U.S. Food and Drug Administration-approved, aseptic continuous-flow facility for sterilising fruit and vegetable purees without compromising nutritional value.
- **Botanical supply unit:** A comprehensive solution for processing raw botanicals into high-value products, equipped with spray dryers, cold storage and blending equipment.
- **Supercritical CO<sub>2</sub> extraction facility:** Uses green, solvent-free technology for the selective extraction of high-value compounds.
- **Capsule laboratory:** Supports research and pilot-scale manufacturing of plant-based capsule products for the nutraceutical and pharmaceutical sectors.

## OUR OFFERING TO INDUSTRY

We invite local industry to engage with us on how we can enhance its competitiveness through the development of market-ready formulations and value-added products. This includes small-scale and pilot production for proof-of-concept manufacturing, as well as access to advanced extraction and sterilisation technologies to modernise production.





## **WORK WITH US:**

**FOR MORE INFORMATION, PLEASE CONTACT:**

**DR RODNEY MANAGA** - Research Group Leader: Agro-processing;  
CSIR Advanced Agriculture and Food.

✉ [RManaga@csir.co.za](mailto:RManaga@csir.co.za)

☎ 012 841 2911

📍 CSIR, 1 Meiring Naude Road, Pretoria.

**LET'S COLLABORATE AND TOUCH LIVES  
THROUGH INNOVATION.**