# Introduction

- **Agronomical biofortification using micronutrient-based fertilizers to enhance crop nutrition, health, and yields, with a focus on addressing hidden hunger and chronic hunger.**
- **800 million people face chronic hunger.**
- **>2.0 billion individuals, primarily children, suffer from micronutrient deficiencies.**

# Economic Impact

**Micronutrient deficiencies impose a significant economic burden.**

**Research by Moench-pfanner et al. (2016) indicates this impact is equivalent to about 5% of the GDP in developing countries.**

# Soil As The Primary Source

- **Plants depend on soil and fertilizers as their primary source of essential micronutrients.**
- **Soil is at the root of the micronutrient deficiency problem.**
- **Addressing human micronutrient deficiency must consider soil as a key component.**

# Successful Examples

- **Selenium-enriched fertilizers in Finland, have improved grain and blood selenium levels.**

- **Projects funded by NATO, such as the Zinc project in Anatolia and the use of Zinc-containing NPK fertilizers in Turkey, have shown positive results.**

# The Role of Micronutrients in Soil

**Micronutrients play a critical role in increasing soil microbe populations.**

**Mycorrhizal, a common soil symbiont, significantly influences plant micronutrient uptake, contributing up to 50% of zinc uptake in various crops (Marschner, 2012).**

# Challenges in Modern Agriculture

**Intensive tillage, monoculture cropping, and glyphosate usage have led to a decline in mycorrhizal colonization.**

**Better fertilization with micronutrients is essential for improved nutritional quality and crop production.**

**Agronomical biofortification, addresses the complex issue of hidden hunger and chronic hunger by enhancing crop nutrition and health.**

**It works towards improving human nutrition, increasing crop yields, and ultimately contributing to a healthier and hunger-free world.**

**Introduces micronutrient enriched fertilizer into existing regional and national human nutritional programs and policies.**

**Fertilizers approach aligns with global efforts to combat micronutrient deficiency, offering an effective, sustainable, and scalable solution.**


**Micronutrient often neglected in soils, holds immense potential in transforming agriculture. AUSMIN- mineral enriched fertilizers have been developed to address this deficiency, offering multifaceted advantages.**

## The Power of AUSMIN

# AUSMIN- Mineral Enriched Fertilizers

enriched with essential micronutrients, driving growth and health. These fertilizers enable improved nitrogen and potassium uptake, enhancing cost-efficiency for farmers and oil palm planters.

Australian Organic Registered Farm Input

ALLOWED INPUT 12416

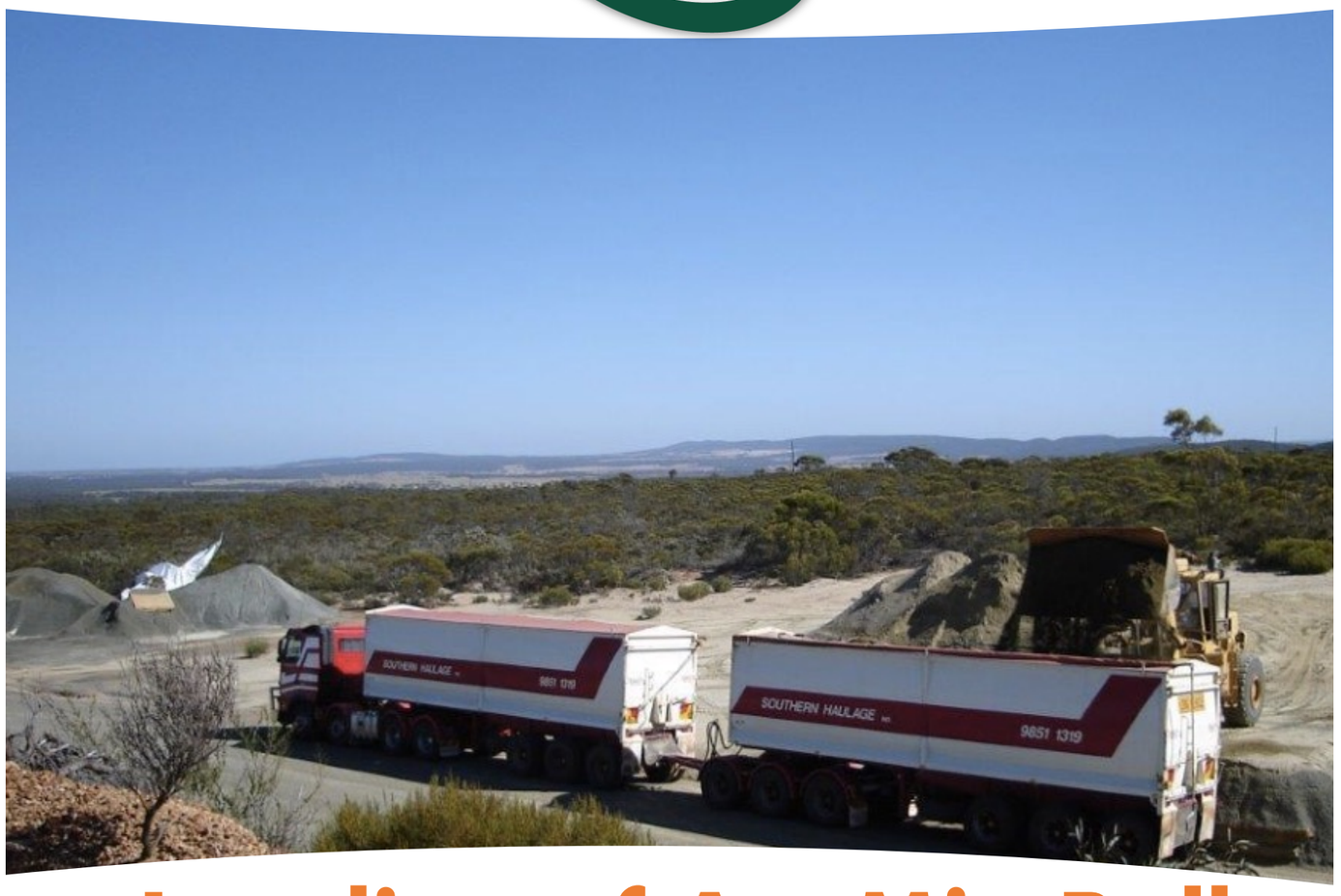
AUSTRALIAN MADE®

ACO CERTIFICATION LTD.


# Australia Governments Department of Agriculture's Organic Approved Certifying Organizations

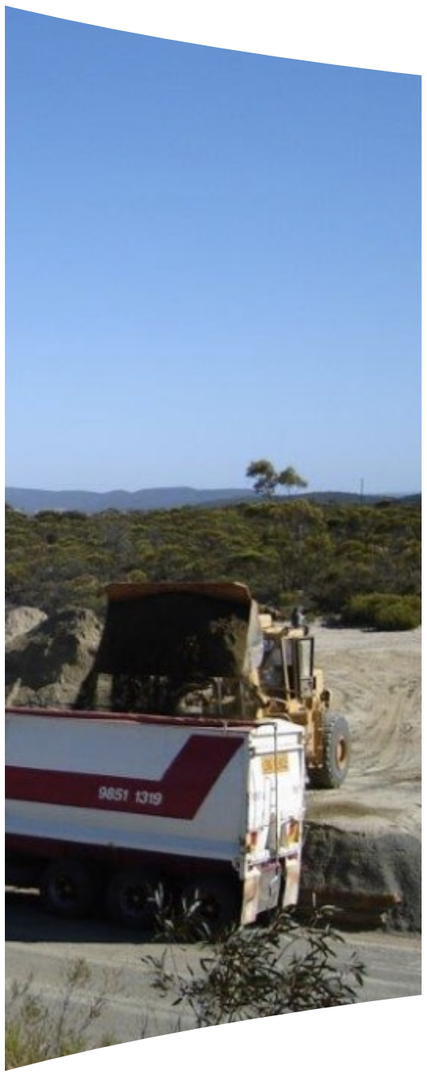
AUSMIN

# Mine Operates Since 1996



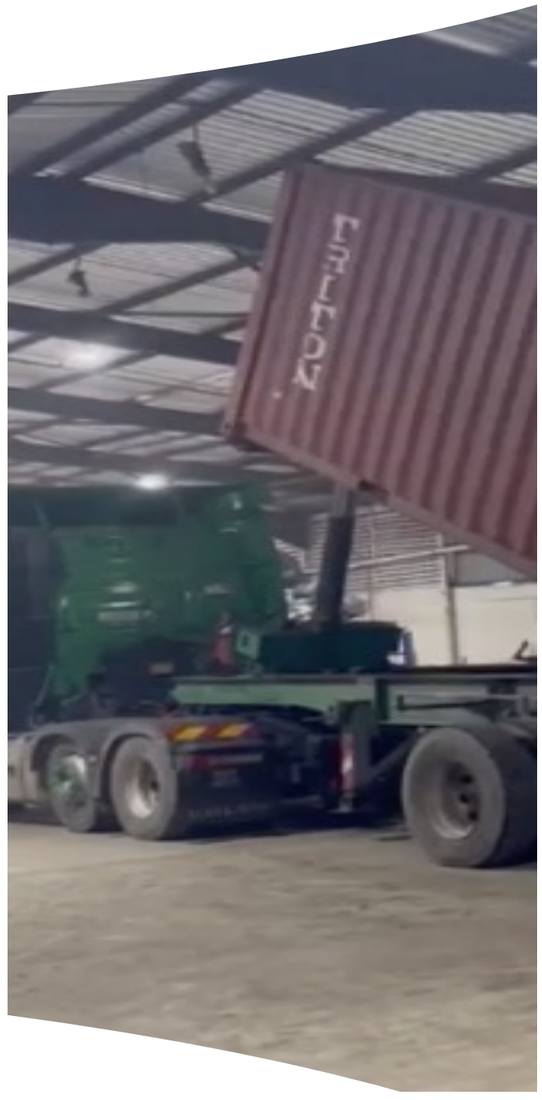


# Loading of AusMin Bulk-Bulk Carriage Truck





# Containerized AusMin bulk For Exporting

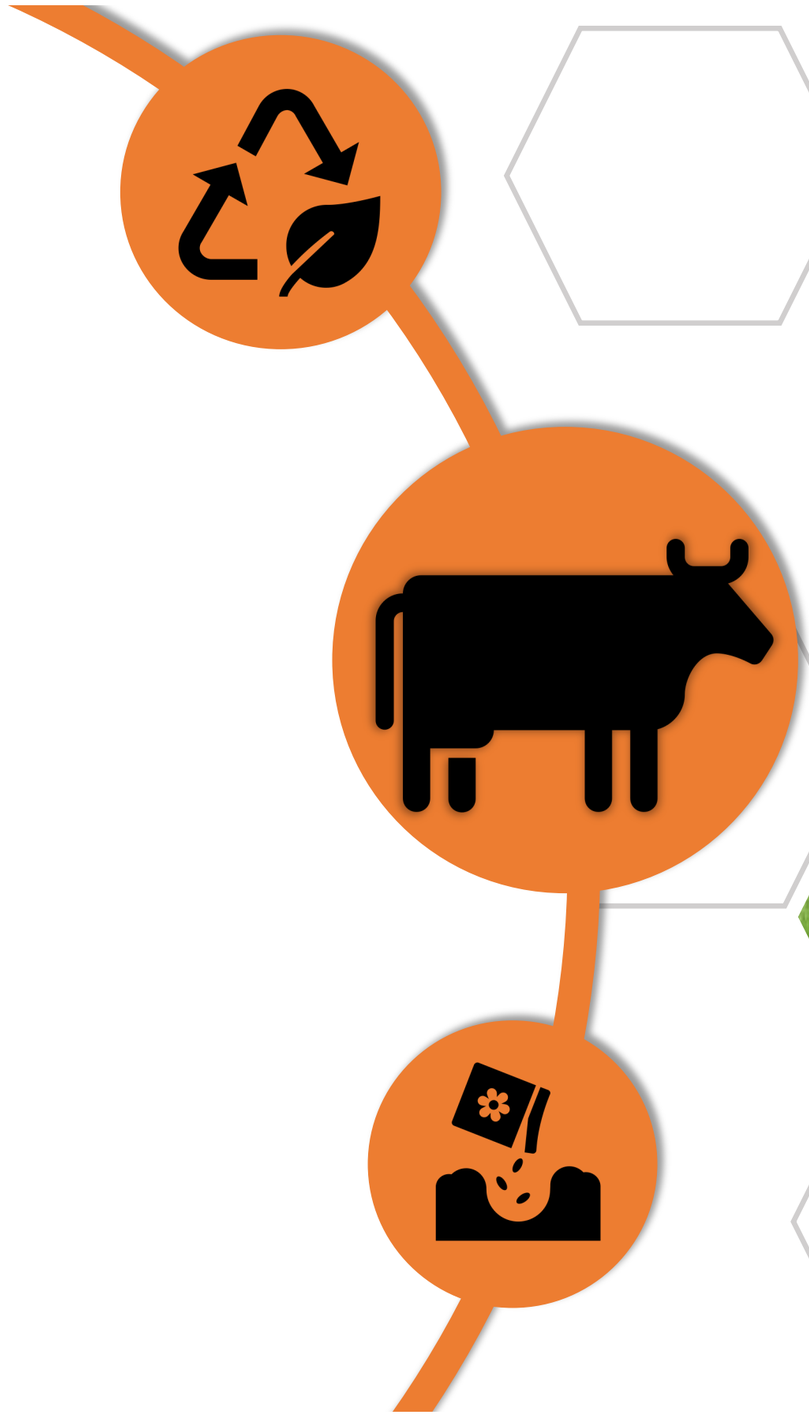



# Exporting Containerized AusMin Bulk

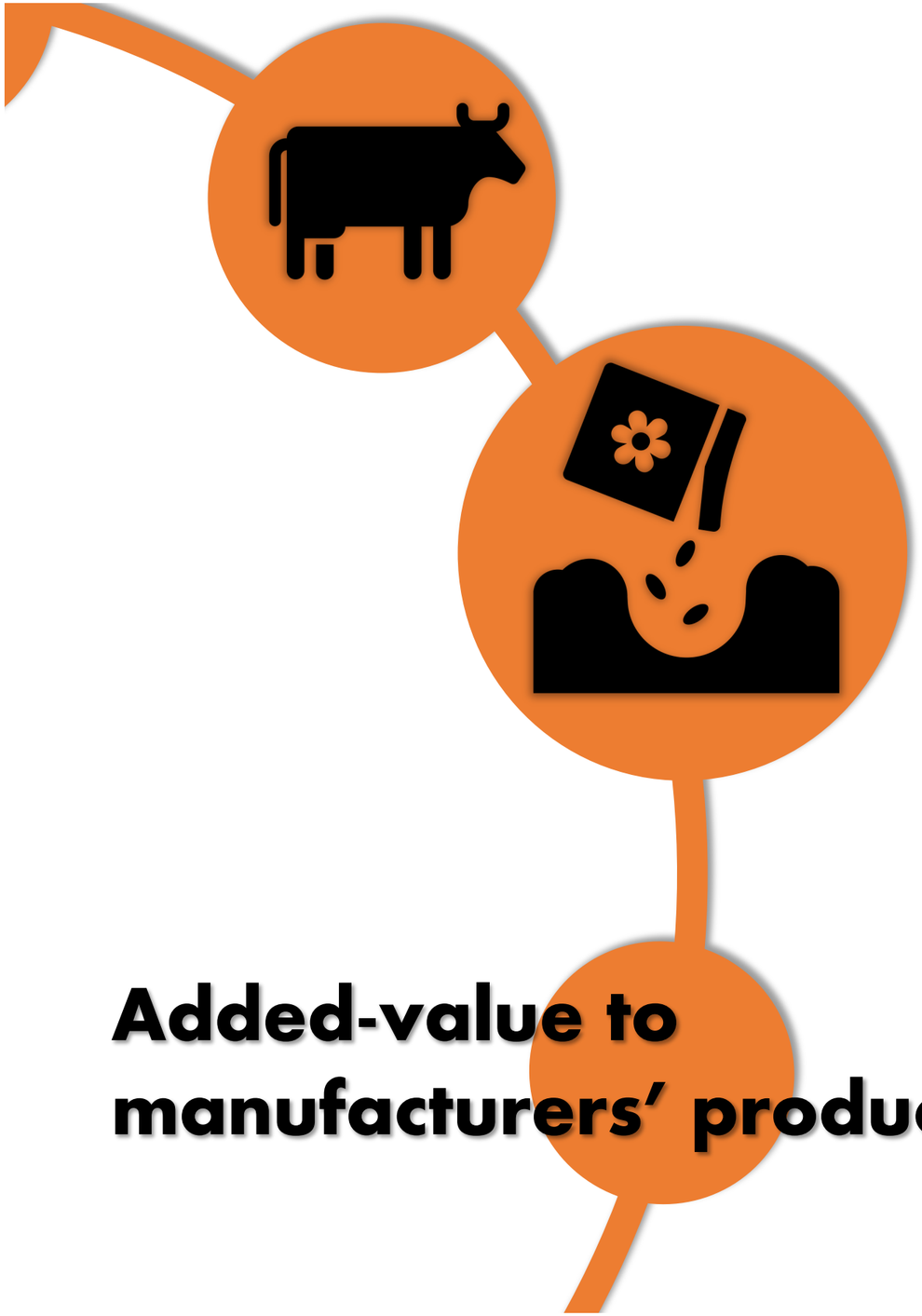
# Unloading AusMin Bulk At Destinated Warehouse


# ELMORE COMPOST & ORGANICS

GROW SAFE®



**A broad-spectrum micronutrients have provided comprehensive nutrients formula to pasture industrial in Australia.**



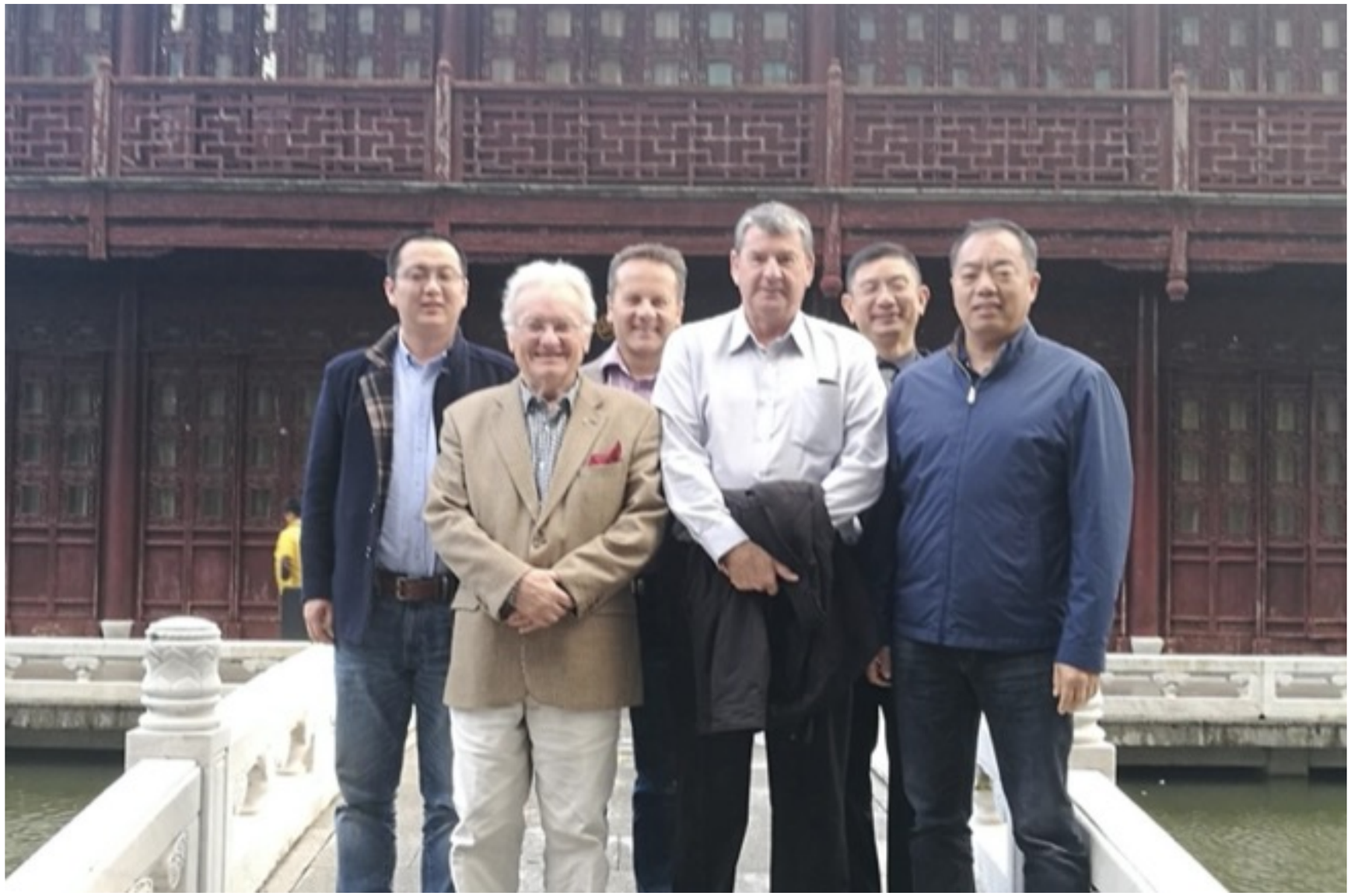
# Added-value to manufacturers' products


# Supply and Distributions AUSMIN in Asia Pacific Region


# Livestock Farmers' Interview


Anniversary of
INTERNATIONAL CERTIFIED LAB
"Trust in High Quality & Sta
of
Food Safety and Agricultural Proc

# Paddy Project, Vietnam



Collaboration with Agriculture Agency, Indore of India

PREMIUM COMPACT FERTILIZER

特制挤压复合肥

BAJA KOMPAK PREMIUM

Gross Weight

50kg

Distributed by/Diedarkan oleh:
Audtim Trading & Services Sdn Bhd
Lot 14531, Block 5, Lambir Land District,
Jalan Airport, 98000 Miri, Sarawak,
Malaysia.

| Minerals | Percentage, % | Minerals | ppm |
|---|---|---|---|
| Silicon (Si) | 62.04% $SiO$ | Lanthanum (La) | 130.0 |
| Iron (Fe) | 10.04% $Fe_2O_3$ | Cobalt (Co) | 110.0 |
| Magnesium (Mg) | 8.29% $MgO$ | Nickel (Ni) | 105.0 |
| Calcium (Ca) | 2.80% $CaO$ | Molybdenum (Mo) | 100.0 |
| Sulphur (S) | 3.00% $SO_3$ | Chlorine (Cl) | 75.0 |
| Sodium (Na) | 1.35% $Na_2O$ | Boron (B) | 22.0 |
| Potassium K) | 1.25% $K_2O$ | Nitrogen (N) | 11.0 |
| Titanium (Ti) | 0.40% $TiO_2$ | Selenium (Se) | 1.50 |
| Copper (cu) | 0.16% $CuO$ | Gold (Au) | 0.50 |
| Phosphorus (P) | 0.34% $P_2O_5$ | Silver (Ag) | 1.00 |
| Manganese (Mn) | 0.06% $MnO$ | KAOLIN CLAY | 5.00% (Nature Mineral Clay) |
| Carbon (C ) | 0.11% $CO_2$ | | |
| Cerium (Ce) | 0.02% $Ce_2O_3$ | | |
| Zinc (Zn) | 0.02% $ZnO$ | | |

# AUSMIN Screening Size

| Screen Size µm | Mass Retained (g) | Retained % | Cum Passing % |
|---|---|---|---|
| 425 | 11.6 | 0.98 | 99.02 |
| 300 | 25.2 | 2.14 | 96.88 |
| 212 | 66.5 | 5.64 | 91.23 |
| 150 | 120.4 | 10.22 | 81.02 |
| 106 | 131.8 | 11.18 | 69.83 |
| 75 | 121.4 | 10.30 | 59.53 |
| 53 | 121.5 | 10.31 | 49.22 |
| 38 | 94.4 | 8.01 | 41.21 |
| -38 | 485.7 | 41.21 | |
| Total | 1178.5 | 100.0 | |

CARBON NEUTRAL

Offer benefits beyond traditional methods

Innovative minerals support sustainable agriculture

# AlgMin

*more with less...*

Promote healthier crops, leading to improved yields

Enhance products range and industry success