

Aquaculture

THE AUSTRALIAN RENDERING INDUSTRY

Internationally recognised for its commitment to quality, hygiene and sustainability, the Australian rendering industry maintains strict adherence to a code of practice, accreditation and training systems.

Industry features:

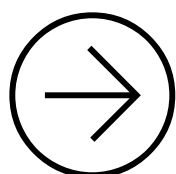
Sustainable: Over 2.7 million tonnes of animal material that would otherwise end up in landfill is recycled into valuable fat, oil, and protein products annually.

Safe and hygienic production: The industry follows strict processes and regulations to maintain safe and hygienic production standards.

Compliance with regulations: Operates in a highly regulated environment with stringent requirements for food safety, animal welfare, and environmental protection.

Modern: Over the past four decades the industry has evolved into a technologically advanced sector.

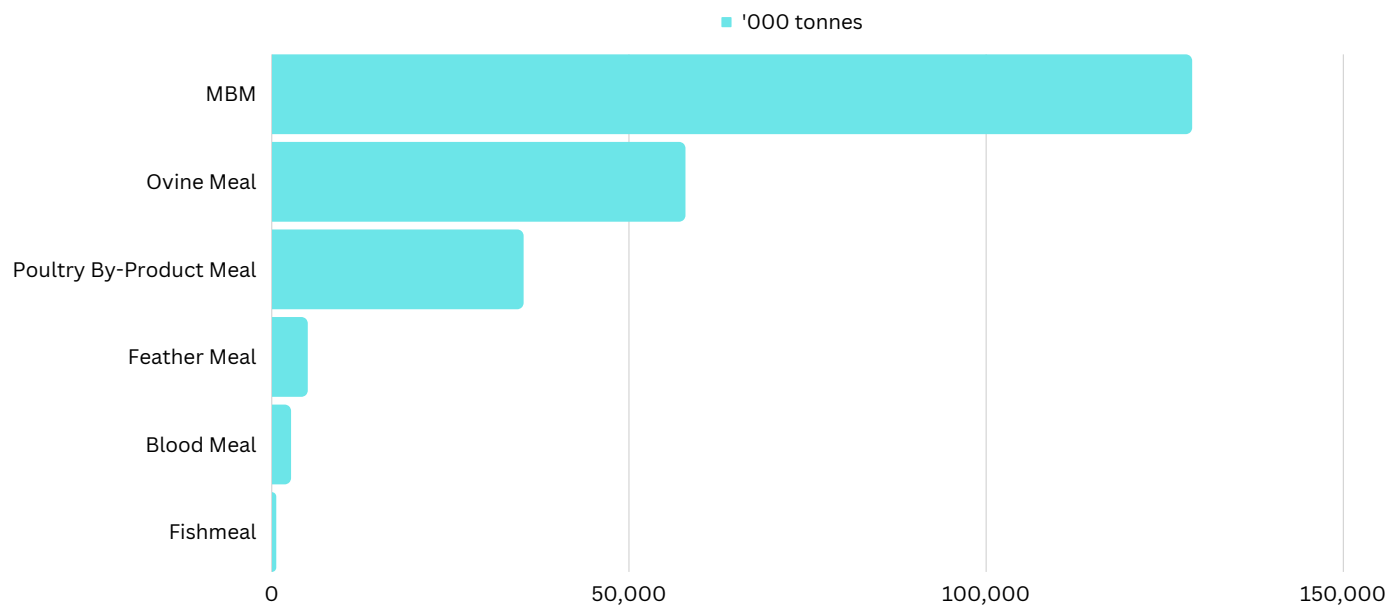
Progressive: Provides ongoing educational support including regular local and international information sessions and a bi-annual International Symposium.



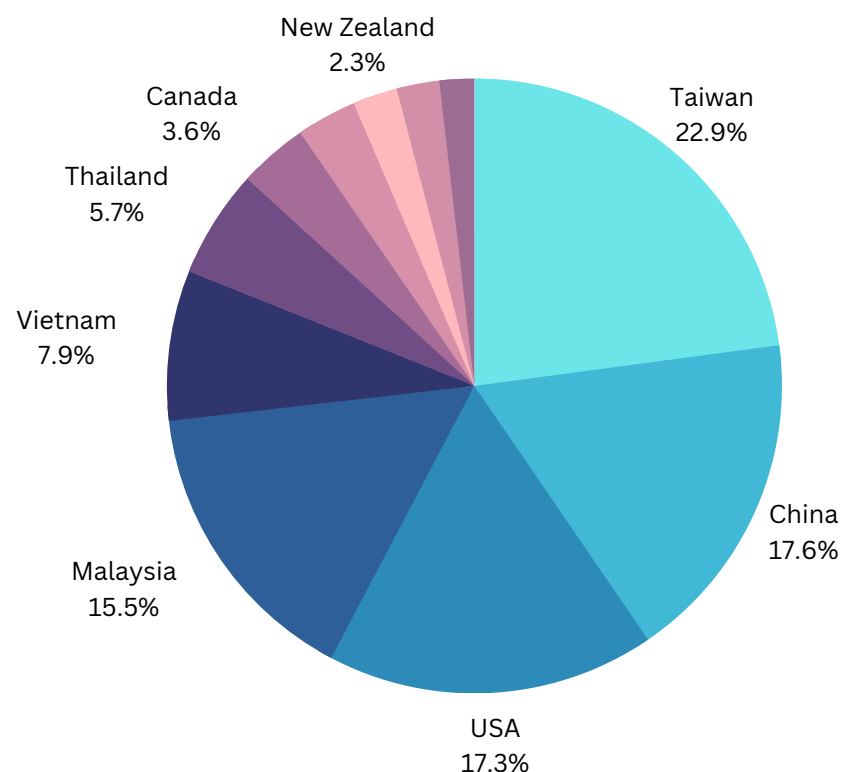
Australian renderers play an important role in the circular economy, reducing food waste and sustainably recycling valuable agriculture resources.

The Australian export industry in numbers

Export product breakdown for animal protein meals (2022)
Total: 270 thousand tonnes



Major export markets for animal protein meals (2022)
Total: 270 thousand tonnes



Sourcing and Processing

The Australian rendering industry is committed to high-quality ingredients and product safety.

Key points:

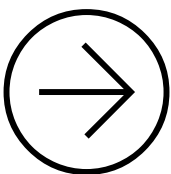
- The rendering process is designed to eliminate any potential hazards, such as bacteria and pathogens, to produce consistent, high-quality ingredients that meet the needs of the pet food market.
- Australia leads the world in hygienic rendering practices and has developed and implemented the Australian Standard for Hygienic Rendering of Animal Products, AS5008, with the support of the ARA.
- The standard uses HACCP (Hazard Analysis Critical Control Point) protocols to establish and maintain hygienic rendering practices.
- Australia has been categorised as having a "negligible" risk of Bovine Spongiform Encephalopathy (BSE) by the World Organisation for Animal Health (OIE), and no cases of BSE have been identified in the country to date.

To gain accreditation from the ARA, rendering plants must comply with the *ARA Code of Practice* and *Australian Standard for the Hygienic Rendering of Animal Products*.

Recycling plants producing fats and oils must also comply with the *ARA Code of Practice for the Recycling of Used Cooking Fats and Oils*.

Standards and provisions include:

- Auditing by independent internationally recognised certification body AusMeat.
- Compliance with biological performance standards that validate heat treatments' ability to eliminate heat-resistant biological hazards such as *Bacillus anthracis*.
- Testing products for *Salmonella* to minimise post-production contamination.
- Access to comprehensive workshops on hygienic rendering of animal products.



Australian accredited plants and the ARA Codes of Practice are available on our website.



Aquaculture Nutrition

Meat and Bone Meal (MBM)*

The protein-rich residue that remains after the moisture and fat have been extracted during the rendering process. It contains both bone and tissue, and the color ranges from golden to dark brown, with a fresh meaty scent.

Protein – 50% (or as specified):

Fat 12%, Fibre 3%, Ash 32%, Calcium 2.2 x Phosphorus level, Phosphorus 4%, Moisture 8%, Pepsin Digestibility 86%.

Amino Acid (%) – 50% MBM:

Aspartic Acid 4.1, Threonine 2.2, Serine 3.1, Glutamic Acid 6.7, Proline 4.4, Glycine 6.2, Alanine 3.9, Valine 2.7, Methionine 0.7, Isoleucine 1.7, Leucine 3.6, Tyrosine 1.3, Phenylalanine 2, Lysine 2.6, Histidine 1, Arginine 3.9, Cystine & Cysteine 0.9, Tryptophan 0.4.

Poultry By-Product Meal (PBM)*

Derived from the clean tissues of slaughtered poultry, including bone, after the removal of moisture and fat through the rendering process. The product may contain whole birds, exclusive of feathers except in such amounts unavoidable in good manufacturing process. It has a fresh poultry scent and a golden to medium brown hue.

Protein – 65% (or as specified):

Fat 15%, Fibre 3%, Ash 15%, Moisture 8%, Pepsin Digestibility 88%.

Amino Acid (%):

Aspartic Acid 5.7, Threonine 2.9, Serine 3.1, Glutamic Acid 8.8, Proline 4.1, Glycine 5.9, Alanine 4.4, Valine 3.8, Methionine 1.4, Isoleucine 3, Leucine 5.3, Tyrosine 2, Phenylalanine 2.9, Lysine 4.3, Histidine 1.4, Arginine 4.5, Cystine & Cysteine 1.2, Tryptophan 1.6.

Hydrolysed Feather Meal (FM)*

Derived by cooking the clean, fresh feathers from slaughtered poultry either under pressure or other methods of hydrolysis sufficiently to break the cysteine bonds and produce a meal with a minimum of 75% pepsin digestibility.

Protein – 80% (or as specified):

Fat 8%, Fibre 4%, Ash 4%, Moisture 8%, Pepsin Digestibility 76%.

Amino Acid (%):

Aspartic Acid 5.2, Threonine 4.4, Serine 9.6, Glutamic Acid 8.6, Proline 8.6, Glycine 5.7, Alanine 3.7, Valine 6, Methionine 0.6, Isoleucine 4, Leucine 6.4, Tyrosine 2.4, Phenylalanine 4, Lysine 1.7, Histidine 0.6, Arginine 5.9, Cystine & Cysteine 2.4, Tryptophan 0.6.

Blood Meal*

A finely ground protein residue derived from fresh blood collected during the slaughtering process. It has a reddish-brown colour with a fresh odour and is insoluble in water.

Protein – 85% (or as specified):

Fat 2%, Fibre 2%, Ash 5%, Moisture 8%, Pepsin Digestibility 92%.

Amino Acid (%):

Aspartic Acid 8.9, Threonine 4.7, Serine 4.8, Glutamic Acid 8, Proline 3.2, Glycine 3.6, Alanine 6.7, Valine 7, Methionine 1.2, Isoleucine 1, Leucine 10.2, Tyrosine 2.7, Phenylalanine 5.9, Lysine 7.9, Histidine 5.3, Arginine 3.5, Cystine & Cysteine 2.5, Tryptophan 1.6.

* typical analysis

The Australian Renderers Association (ARA) is the national membership body within Australia which represents the interests of producers and traders of rendered animal products at the State and Federal Government levels and any forum where there is a need for the industry to be represented. Whilst it does not become involved in commercial issues it nevertheless facilitates trade in rendered products domestically and internationally.