

# AGRICULTURE 4.0

Australia as a global hub for  
agtech and foodtech innovation



## - AUSTRADE'S ROLE

- AUSTRADE'S AUSTRALIA FOR AGRICULTURE 4.0 INITIATIVE
- MARKET LANDSCAPE FOR ALTERNATIVE PROTEINS

## AUSTRADE SERVICES

### For Australian businesses:

- Advice on doing business overseas
- Information and insights on international trends and new business opportunities
- Introductions to networks of key decision makers, customers and contacts

### For international companies:

- Provide insight on Australian capabilities
- Identify potential investment projects and strategic alliance partners
- Identify and contact Australian suppliers.

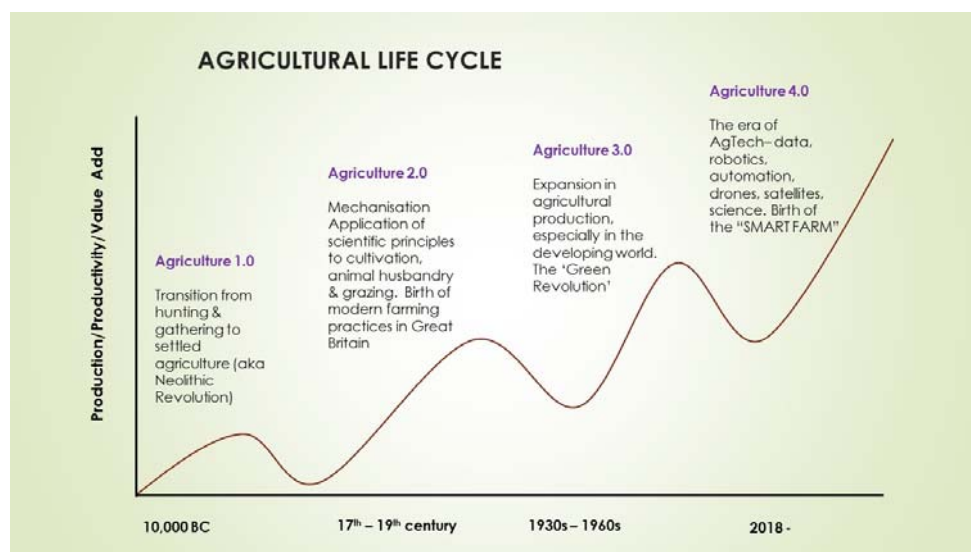
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## AUSTRADE'S GLOBAL NETWORK

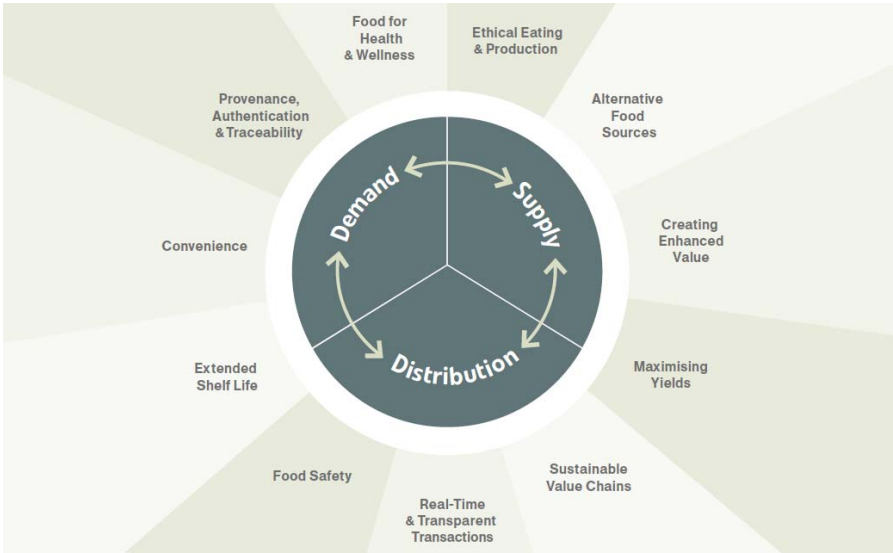


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## AGRICULTURE 4.0



# DRIVERS OF AGRICULTURE 4.0



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# CURRENT STATE OF PLAY



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## AUSTRALIA FOR AGRICULTURE 4.0

- Launched by Minister Birmingham on 19 February 2019 at evokeAG.



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## WHY AUSTRALIA FOR AGRICULTURE 4.0



Agriculture 4.0

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## WHAT AUSTRADE IS DELIVERING: EVOKEAG MISSION



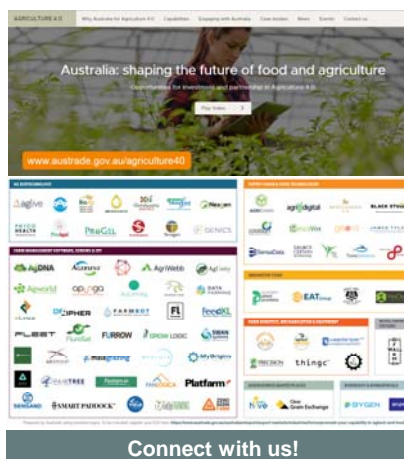
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## WHAT AUSTRADE IS DELIVERING: NEW ASSETS AND SOCIAL ADVOCACY

Brochure, case studies and insight pieces



Agriculture 4.0 website  
[www.austrade.gov.au/agriculture40](http://www.austrade.gov.au/agriculture40)



Social media toolkit & asset library  
[ibrand.austrade.com](http://ibrand.austrade.com)



Agriculture 4.0

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## AUSTRALIA: SHAPING THE FUTURE OF FOOD AND AGRICULTURE

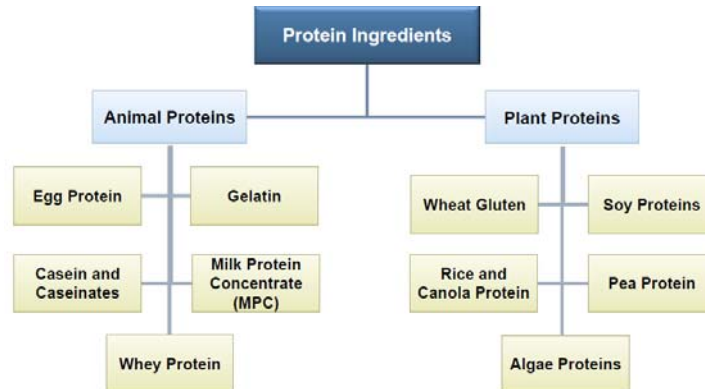


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## GLOBAL PROTEIN MARKET

- Global protein ingredients market valued at AU\$50.8 billion (US\$36.1 billion) in 2017.
- Plant-based proteins market valued at AU\$12.4 billion (US\$8.8 billion) in 2017.
- Animal and plant-based proteins are expected to grow to reach AU\$71.9 billion (US\$51 billion) by 2022 and AU\$16.7 billion (US\$11.9 billion) for plant-based proteins.



Source: Frost & Sullivan (2018), "Agriculture and Nutrition Opportunity Engine Series – Opportunities in the Global Protein Ingredients Market, Forecast to 2022".

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## KEY PLAYERS IN THE GLOBAL PROTEIN MARKET



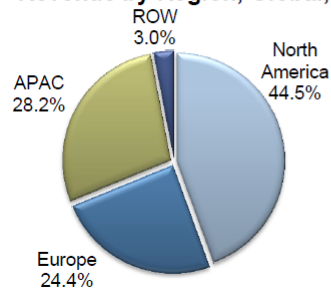
Source: Frost & Sullivan (2018), "Agriculture and Nutrition Opportunity Engine Series – Opportunities in the Global Protein Ingredients Market, Forecast to 2022".

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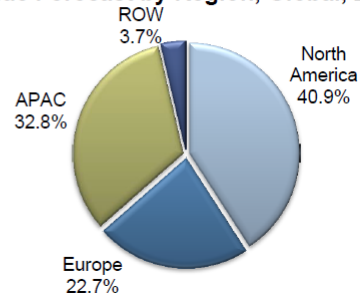


## PLANT PROTEIN FORECAST

**Plant Protein Ingredients Market: Percent Revenue by Region, Global, 2017**



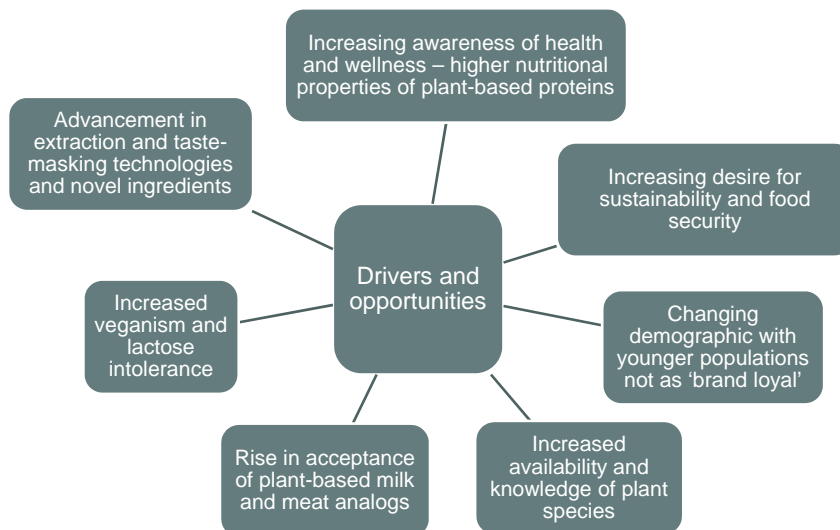
**Plant Protein Ingredients Market: Percent Revenue Forecast by Region, Global, 2022**



Source: Frost & Sullivan (2018), "Agriculture and Nutrition Opportunity Engine Series – Opportunities in the Global Protein Ingredients Market, Forecast to 2022".

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## MARKET DRIVERS AND OPPORTUNITIES FOR PLANT-BASED PROTEINS



Source: Frost & Sullivan (2018), "Agriculture and Nutrition Opportunity Engine Series – Opportunities in the Global Protein Ingredients Market, Forecast to 2022".

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## AUSTRALIAN CASE STUDIES



**UTS's Deep Green Biotech Hub**  
Microalgae in a range of alternative food products

"By 2020, Australia's packaged vegan food market will be worth \$215 million"  
Euromonitor International



**Edible Bug Shop**  
Breeding insects for human consumption

"2.25 million Australians aged 18 and over live a meat-free life"  
Source: Roy Morgan Research



**Life Health Foods**  
Australia's largest manufacturer of analogues

"Australia is the third fastest growing market in the world for vegan foods"  
Euromonitor International

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## GLOBAL PLANT PROTEIN INVESTMENTS

Company	Market Activity Type	Year	Plant Protein Category	Description
Roquette	Expansion	2017	Pea Protein	The company is constructing a giant pea facility in Canada and the production is expected to begin in 2019 with a production capacity of 120,000 tons per year. Production of other plant-based proteins is also anticipated to add to the lines at a later stage in the coming years.
Dupont Nutrition	Product Launch	2017	Soy Protein	The company launched SUPRO XT55 Isolated Soy Protein that addressed functional limitations of previous technologies and offering product manufacturers direct cost savings.
ADM	Product Launch	2017	Wheat Protein	Launched a range of wheat protein concentrates, Nutriance. The hydrolyzed wheat-sourced protein concentrate delivers 85% protein content, high glutamine content, and is expected to be used in formulation of cake, biscuits, bars, and beverages.
Tate & Lyle	Expansion	2017	All plant protein	The company unveiled its global innovation center in Germany, which aims to expand its customer-facing facilities. The facility now has dedicated areas of prototype production for dairy, convenience, bakery and meat preparation. The center will also hold innovation workshops, seminars, and on-site technical training.
Zivo Bioscience	Partnership	2017	Algae protein	The company partnered with feed additive producer NutriQuest to jointly develop and test animal nutrition products using Zivo's algae strain. The company also partnered with Algatek based in Spain. This is a cultivation partnership to produce its proprietary algae strain in photobioreactors.

Source: Frost & Sullivan (2018), "Agriculture and Nutrition Opportunity Engine Series – Opportunities in the Global Protein Ingredients Market, Forecast to 2022".

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## START-UPS AND FUNDING IN PROTEIN MARKET\*

Company	Product Category Focus	Funding
Soylent	Sports nutrition and meal replacements category: Offers products in the form of powder, beverages – free from animal protein, lactose and nuts.	\$50 million Series B
Before Brands	Infant formula: Peanut based products that allows kid's immune system to be prepared for any kind of food allergies. The products are a combination of peanut, egg, milk, fish, shellfish, tree nuts, soy, wheat, sesame, and Vitamin D.	\$35 million Series B round
Omni Active Health Technologies	The company excels in lutein and zeaxanthin natural extracts	\$35 million in a late-stage round
Macacha	Nutritional shake for women health	Undisclosed
NutriLeads	An innovative nutrition & health startup that makes ingredients for specific customer groups	Undisclosed – series A
Nutriati	Focused on developing new plant-based ingredient alternatives	\$8 million Series A
Finless Foods	Cultured meat and fish – The category involves growing meat or fish in a laboratory by applying methods of tissue engineering	Undisclosed
Memphis Meats	Cultured meat and fish	\$17 million Series A
Miyoko's Kitchen	Animal-based protein: dairy alternatives such as cheese using cashew nuts, rice and plant-derived oils	\$6 million Series B
Impossible Foods	Plant-based ingredients	\$257 million
Chirps and Bugsolutely China	Insect-based foods	Undisclosed
Myco Technology	Sugar replacement category	\$35 million Series B
DouxMatok	An Israel-based sugar replacement product category company	\$8.1m in a Series A

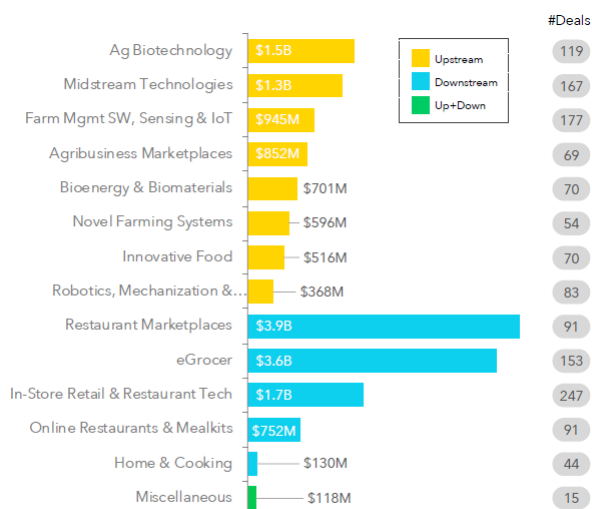
\*Amounts are in USD and proteins include animal and plant-based

Source: Frost & Sullivan (2018), 'Agriculture and Nutrition Opportunity Engine Series'

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## INVESTMENTS INTO AGTECH & FOODTECH 2018

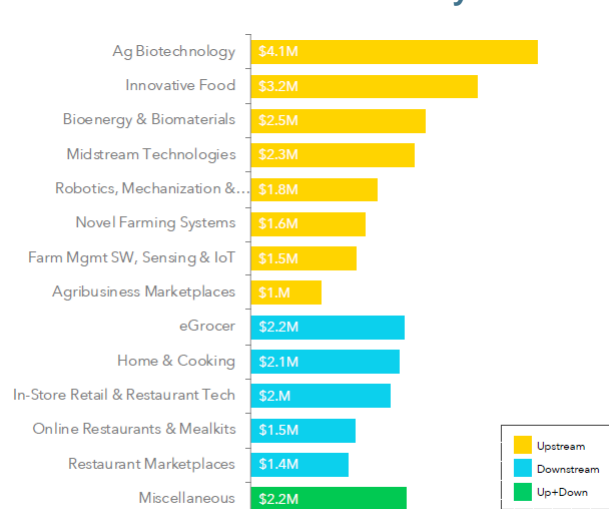
### Total invested 2018



AgFunder

AgFunder 2018 Investment Report

### Median Deal size by sector



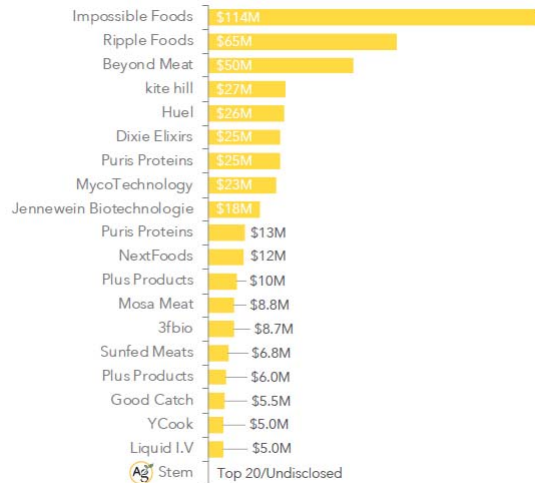
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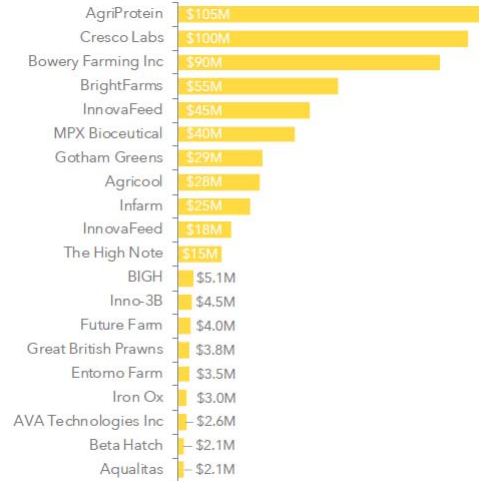
## STARTUPS & INVESTMENT INTO PROTEIN

### Top 20 investment deals in 2018

#### Innovative Food



#### Novel farming Systems



AgFunder 2018 Investment Report

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## Get in touch!

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[www.Austrade.gov.au/agriculture40](http://www.Austrade.gov.au/agriculture40)

