

AGRICULTURE AS AN INSTITUTIONAL ASSET CLASS

A compelling investment opportunity

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AUSTRALIA: ON THE DOORSTEP OF THE GLOBAL POPULATION GROWTH CENTRES

Ideally placed to supply the increased global demand for protein



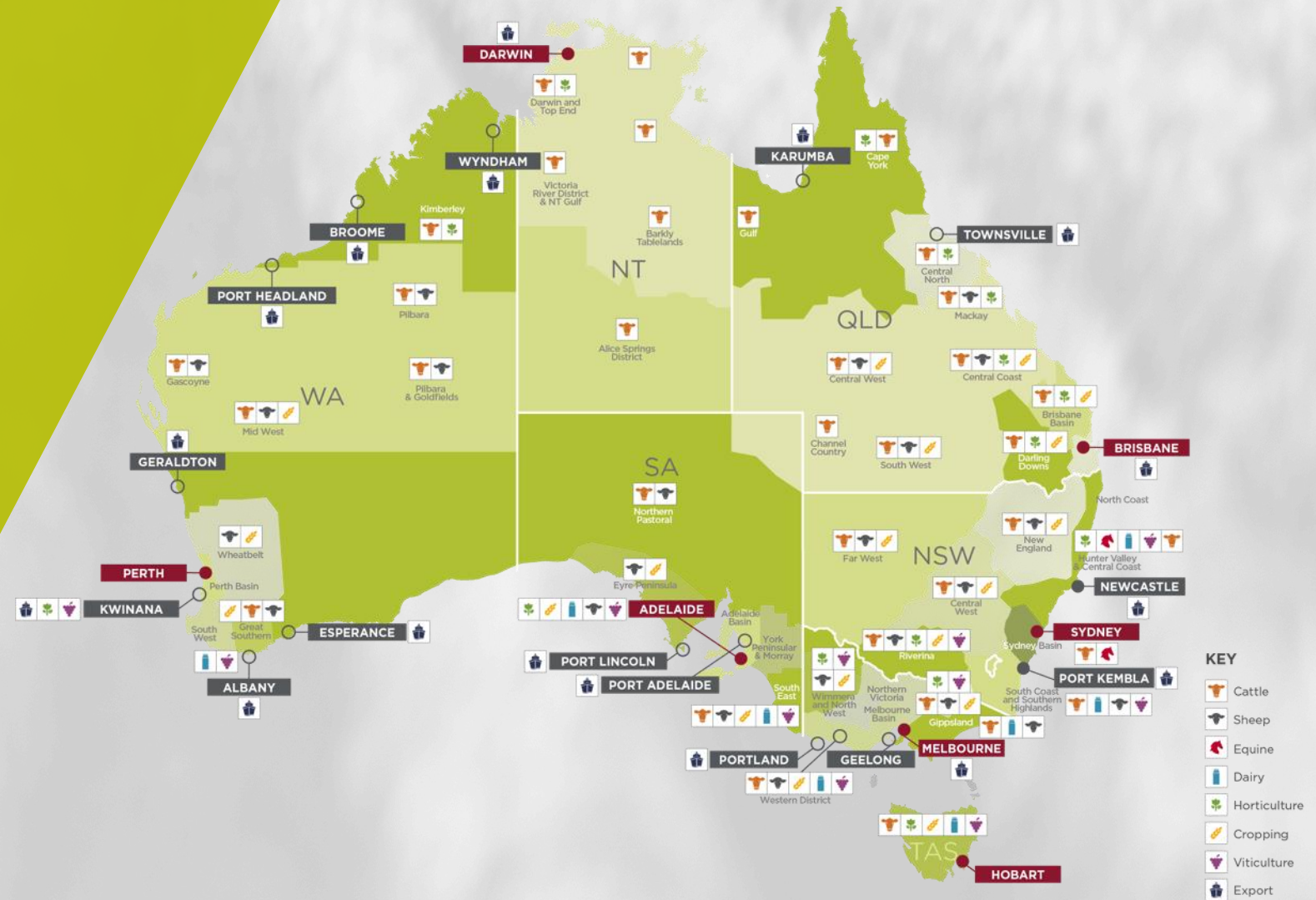
THERE ARE MORE PEOPLE LIVING
INSIDE THIS CIRCLE THAN OUTSIDE IT

AUSTRALIA'S AGRICULTURAL INDUSTRY

A brief overview

Australia's agriculture sector comprises a diverse range of industries

- Extensive grazing of livestock
- Broadacre cropping
- Intensive animal production
- Horticulture / Viticulture
- Permanent crops
- Aquaculture



AUSTRALIA'S AGRICULTURAL INDUSTRY

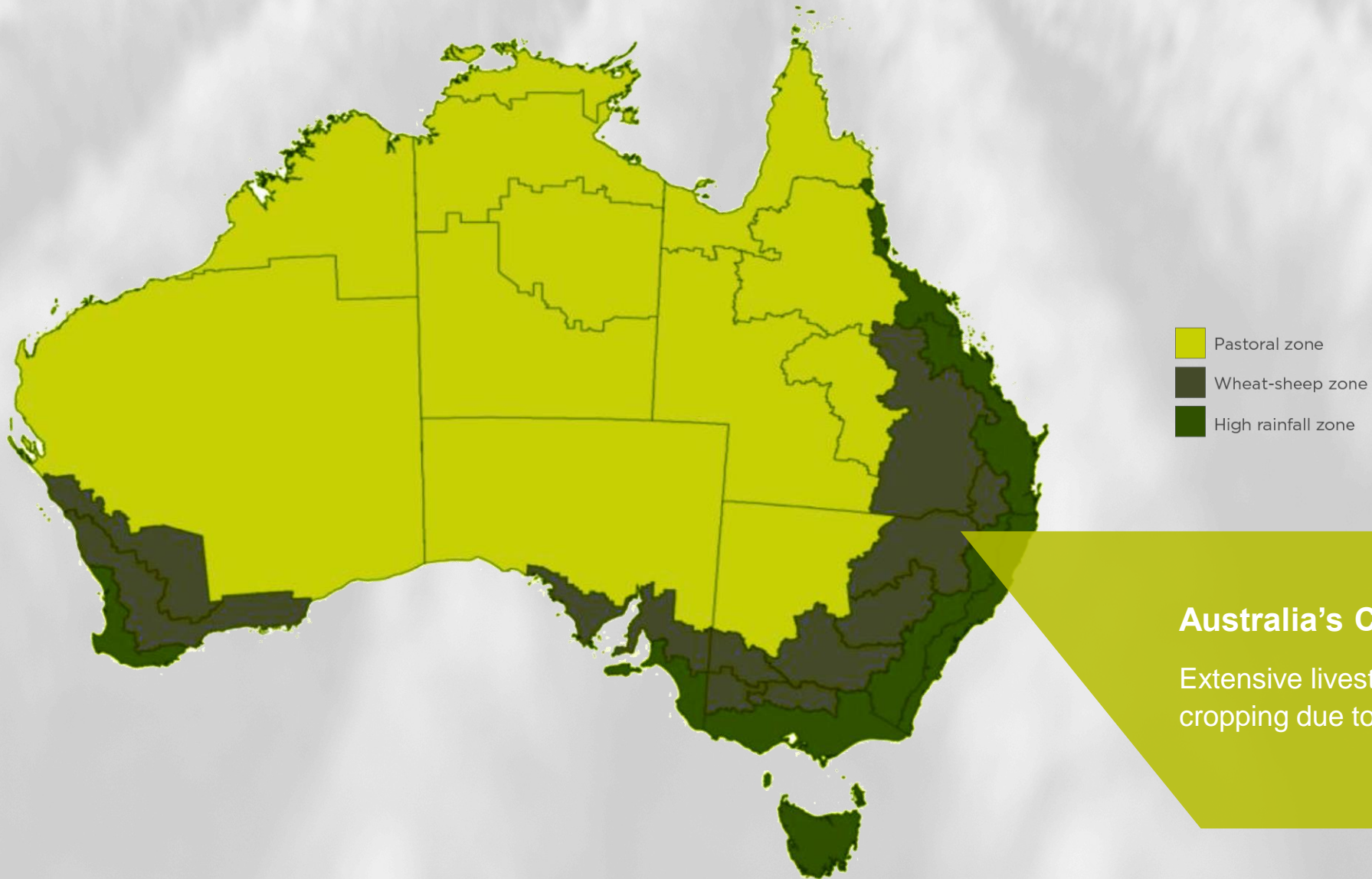
We have a number of important advantages:

- Transparent rule of law
- Rigorous regulatory and compliance systems
- Democratically elected government
- Strong public institutions
- Triple-a credit rating
- Stable economic and political system
- **World-class environmental practices**
- **Strong food safety systems**
- **World-class animal welfare and quality control systems**



Traceability is critical

AUSTRALIA'S COMPARATIVE ADVANTAGES



Australia's Comparative Advantage

Extensive livestock grazing and broadacre cropping due to our relative abundance of land

AUSTRALIA HAS A FAVOURABLE CLIMATE FOR AGRICULTURE

Australia



Northern hemisphere





HUMAN RESOURCES

- Educated, connected and invested farmers
- Research & Development extension services
- Marketing services

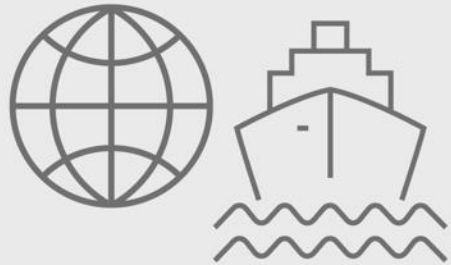
A close-up photograph of a hand watering two small green seedlings in soil. A single drop of water is captured mid-fall between the two plants. The seedlings have two leaves each and are growing from dark brown soil. The background is a soft, out-of-focus green.

GOVERNMENT POLICY

- Frameworks that encourage investment
- Maintain control over foreign investors - FIRB
- Negotiate Free Trade Agreements
- Little government interference in our agricultural industries

\$62B

Value of production

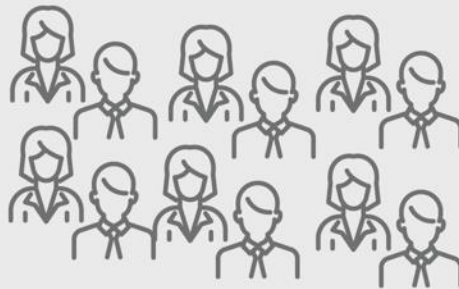


\$49B

Value of exports

250,700

People employed
in agriculture



85,000

Farming enterprises



3%

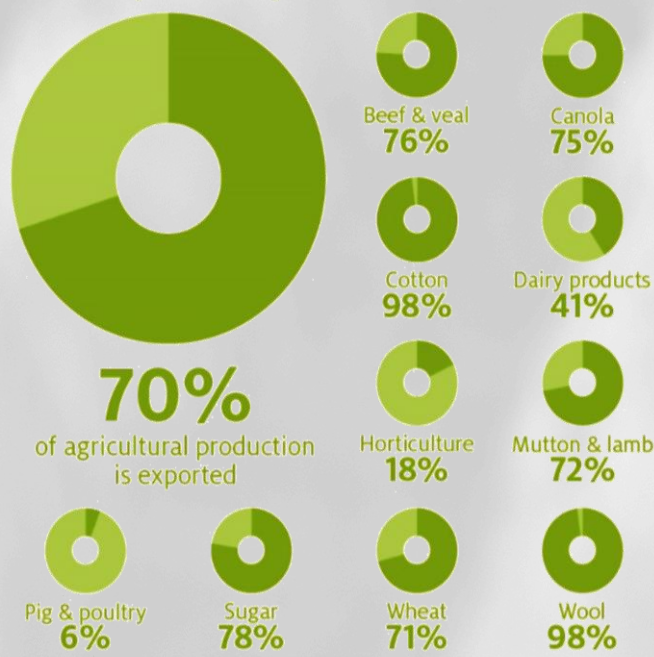
Contribution
to GDP



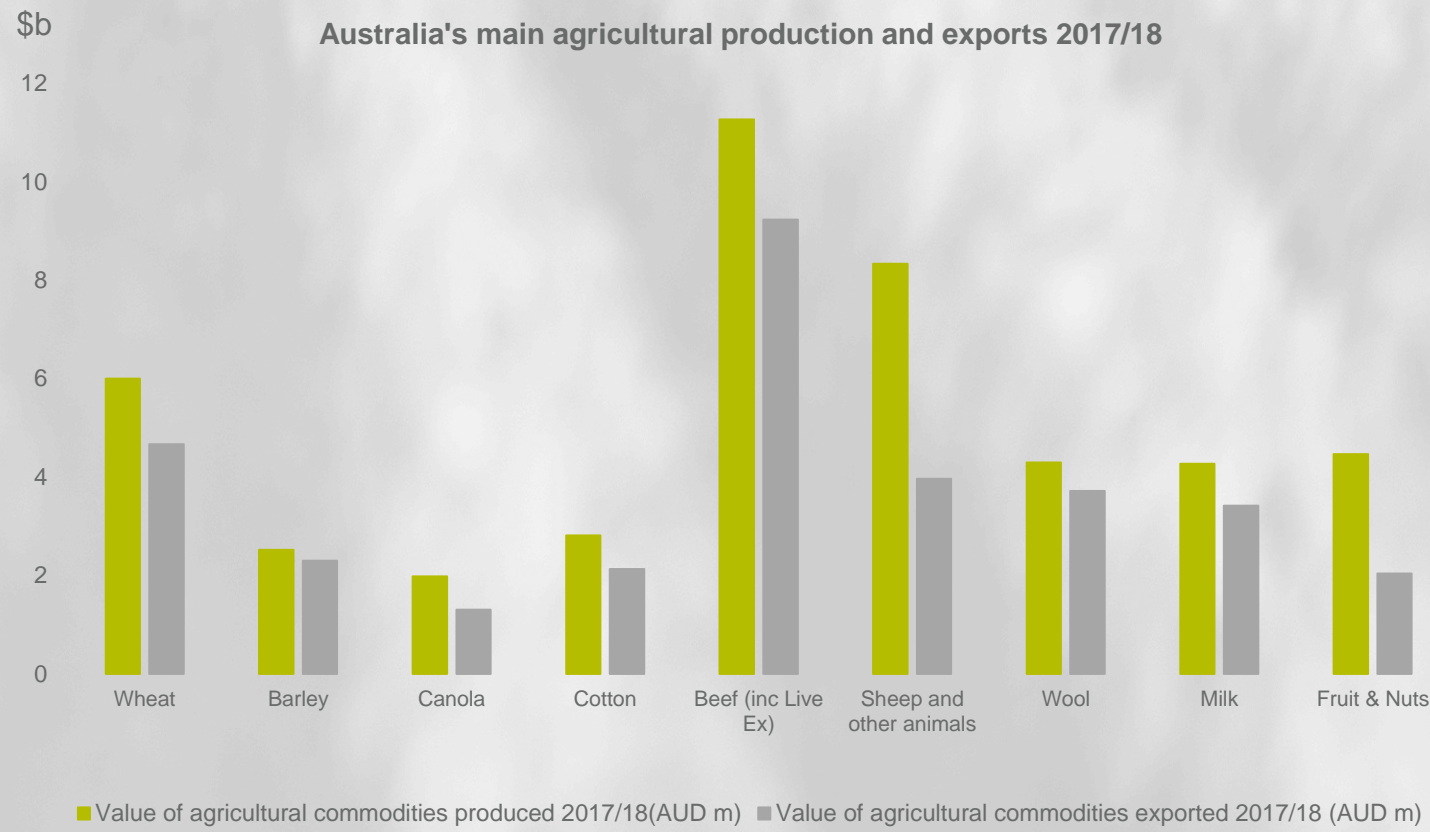
**AGRICULTURE IS AN
IMPORTANT
CONTRIBUTOR TO
THE AUSTRALIAN
ECONOMY**

MOST OF OUR PRODUCTION IS EXPORTED

Share of agricultural production exported,
3 year average, 2014-15 to 2016-17



Australia's main agricultural production and exports 2017/18



AUSTRALIA'S MAIN AGRICULTURAL COMMODITIES

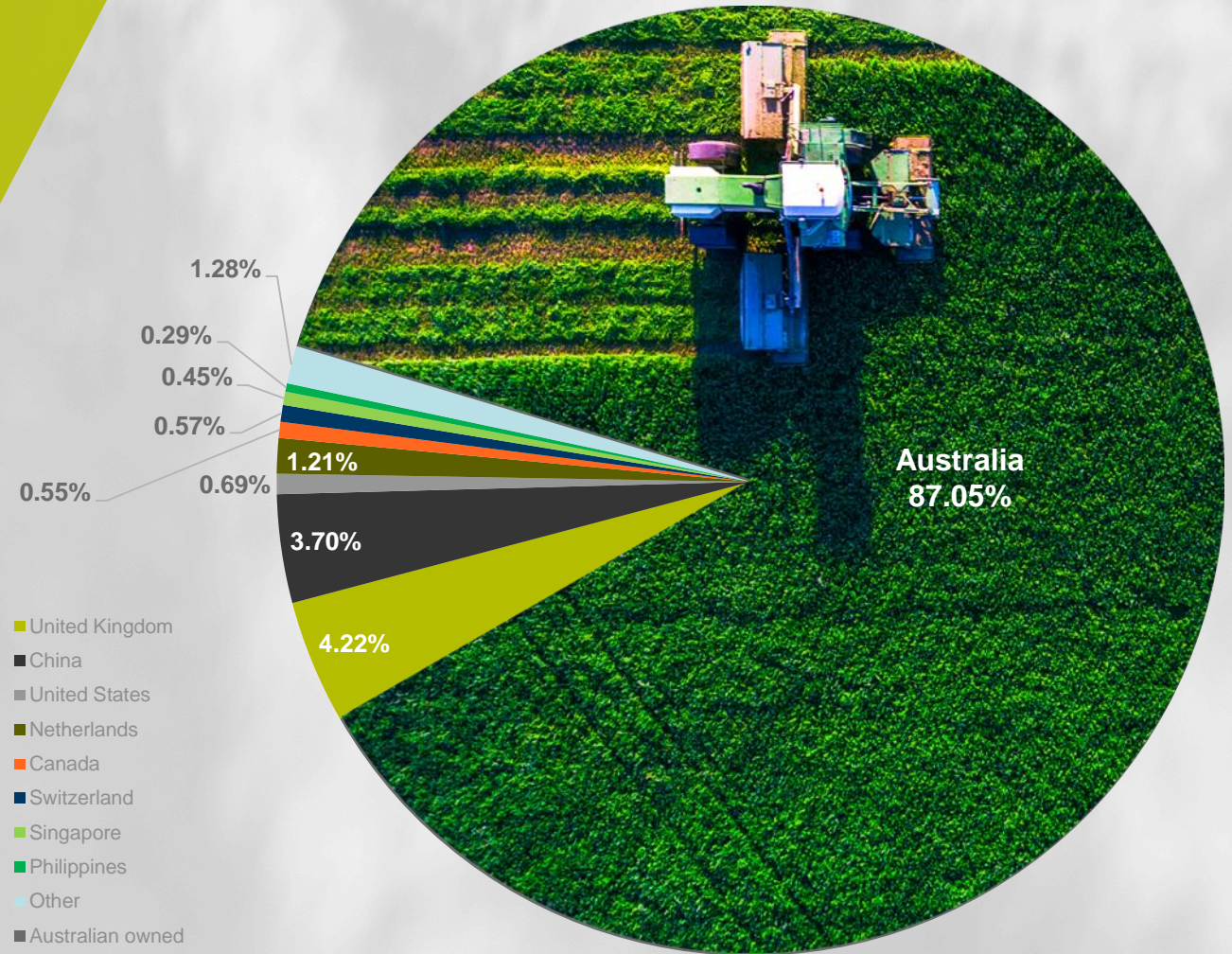
2017/18	'000 tonnes	Wheat	Course grains	Oilseeds	Cotton	Meat	Wool	Sugar
Australian production		21,244	11,991	5,205	1,000	4,610	422	4,500
Australian export		15,500	8,823	2,494	872	4,650	328	3,333
World production		763,000	1,374,000	574,000	26,900	278,000	1,156	193,000
World consumption		738,000	1,374,000	571,000	26,500	276,000	1,154	183,000
World exports		179,000	186,000	168,000	8,900	30,500	547	63,000
Australian production / world production		2.78%	0.87%	0.91%	3.72%	1.66%	36.51%	2.33%
Australian exports / world consumption		2.10%	0.64%	0.44%	3.29%	1.68%	28.42%	1.82%
Australian exports / world trade		8.66%	4.74%	1.48%	9.80%	15.25%	59.96%	5.29%

SOURCE: ABS

WHO OWNS THE FARM?

Ownership of Australian Agricultural Land - 2017

	'000 Ha
Total	390,000
United Kingdom	16,445
China	14,422
United States	2,693
Netherlands	4,708
Canada	2,130
Switzerland	2,227
Singapore	1,763
Philippines	1,121
Other	5,006
Australian owned	339,485



An aerial photograph of a straight, two-lane asphalt road stretching from the foreground into the distance. The road is flanked by a dense line of trees and shrubs. To the left of the road is a large field of bright yellow rapeseed, and to the right is a green field. In the far distance, a small body of water is visible under a dramatic sky with a low sun on the left, casting a golden glow over the landscape. The sky transitions from a deep blue to a lighter blue with some wispy clouds.

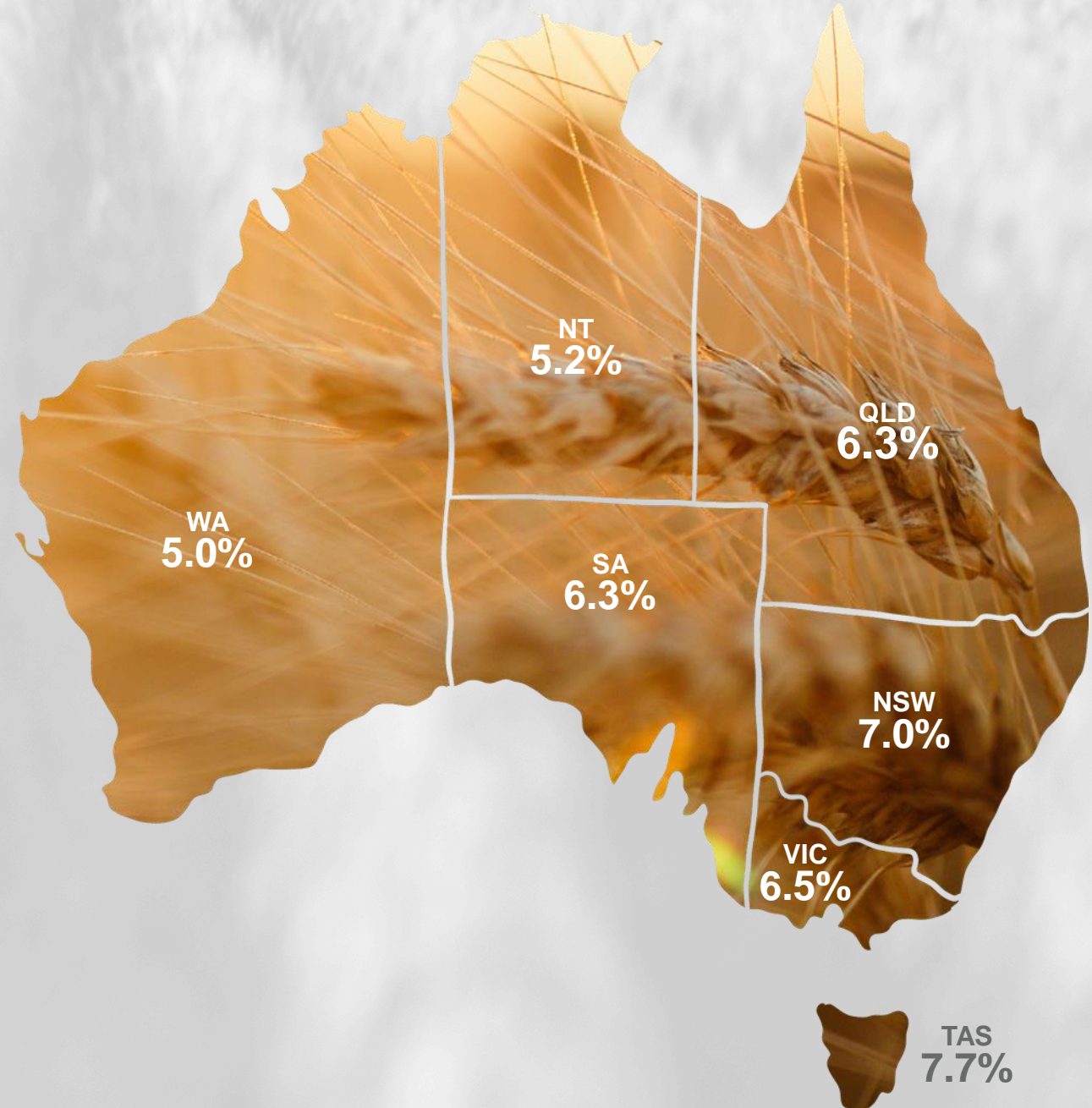
**“Buy land, they
aren’t making it
anymore”**

- Mark Twain

AVERAGE ANNUAL GROWTH IN FARMLAND MEDIAN PRICES OVER 20 YEARS



AUST
6.6%



A close-up photograph of a person's hands holding a small amount of dark, moist soil. The person is wearing a blue and white checkered shirt and blue jeans. The background is a blurred field of brown soil. A large green triangular overlay covers the bottom right portion of the image, containing white text.

RETURNS FROM AGRICULTURE ARE TWO-FOLD

- **Yield** – the income returns from farming activities
- **Capital return** – derived from the value of land going up over time
- The capital return has two components:
 - The value derived from inflation
 - The value derived from improving or changing land use

The value of agricultural land is derived from its economic output

THE KEY DRIVERS OF AGRICULTURE AS AN ASSET CLASS



POPULATION

2030	2050
8.5 BILLION	9.7 BILLION

FOOD SECURITY

Food Safety

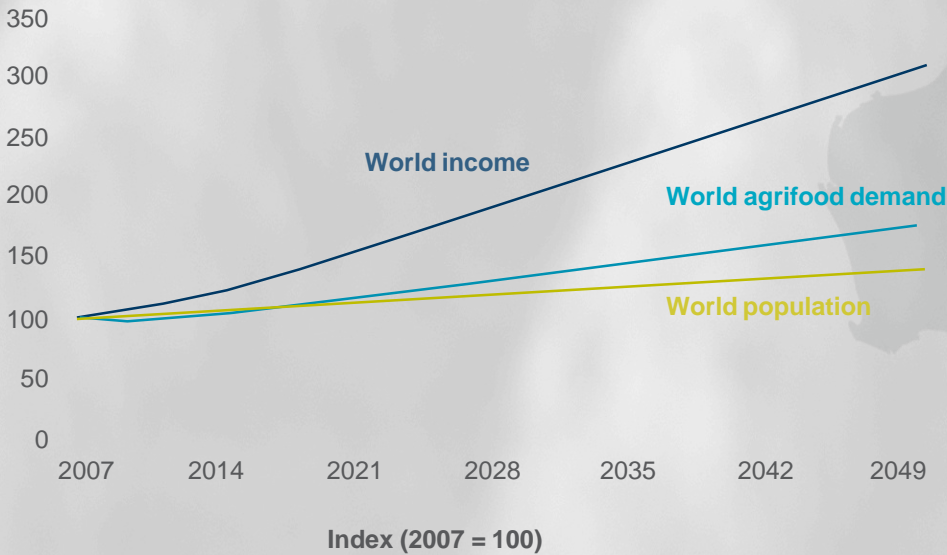
CHANGING DIETS

Rising middle class in Asia

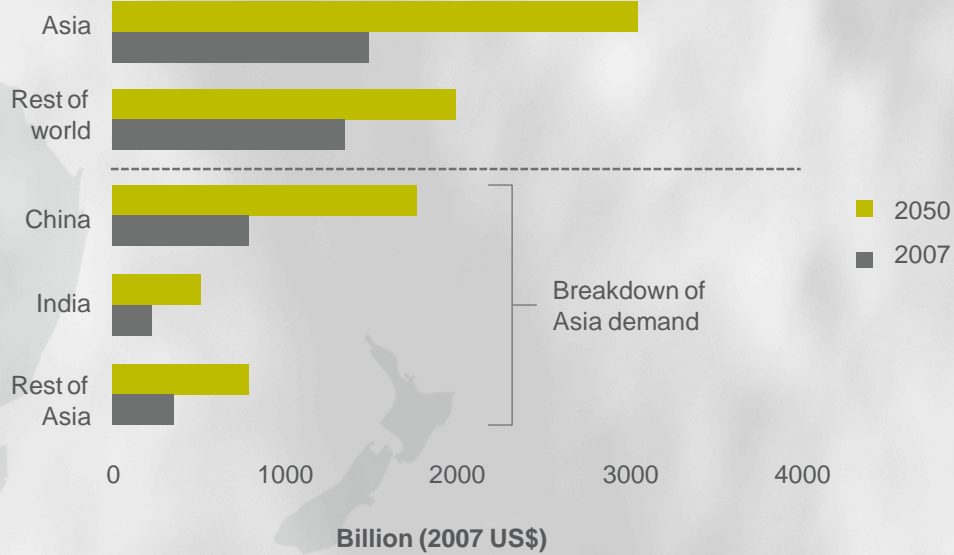
THE KEY DRIVERS FOR INVESTMENT IN AUSTRALIAN AGRICULTURE

Most of the projected rise occurs in Asia, where demand for food is expected to double by 2050

World agrifood demand, population and income



World agrifood demand by region



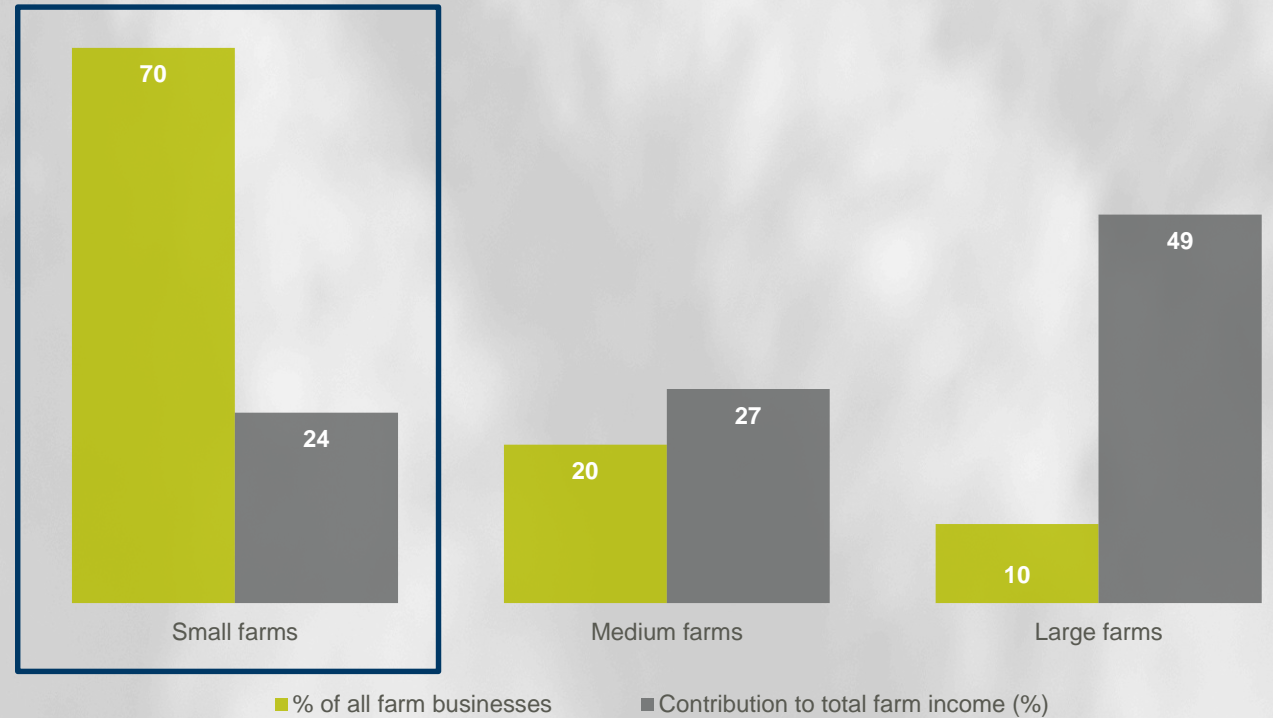
A large center pivot irrigation system is shown over a lush green field. The system's long metal arm, supported by a series of towers, extends from the foreground into the distance. The sky is a vibrant mix of orange, yellow, and blue, indicating a sunset or sunrise. The field below is filled with rows of young green plants.

FUNDING FUTURE PRODUCTIVITY

- We will need to produce more food from less
- No technological constraint but a capital constraint
- Need to adopt new technologies and greater scale
- The funding gap: \$1 trillion by 2050*
- Little access to capital markets
- Traditionally, expansion funded with bank debt or equity
- New Capital: Large inflows of foreign capital into agriculture
- Also, domestic super funds, private equity and family offices

AUSTRALIA'S FARM BUSINESSES

- Many sub-economic in size
- Structural change will be necessary
- New capital requires scale





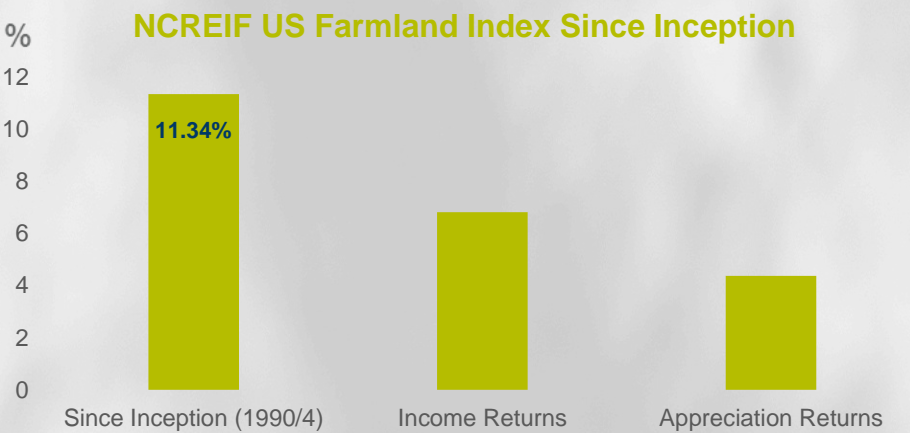
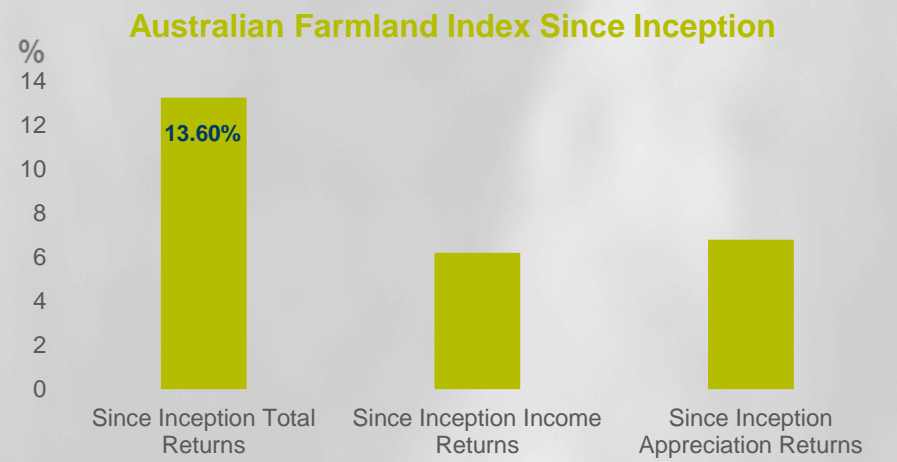
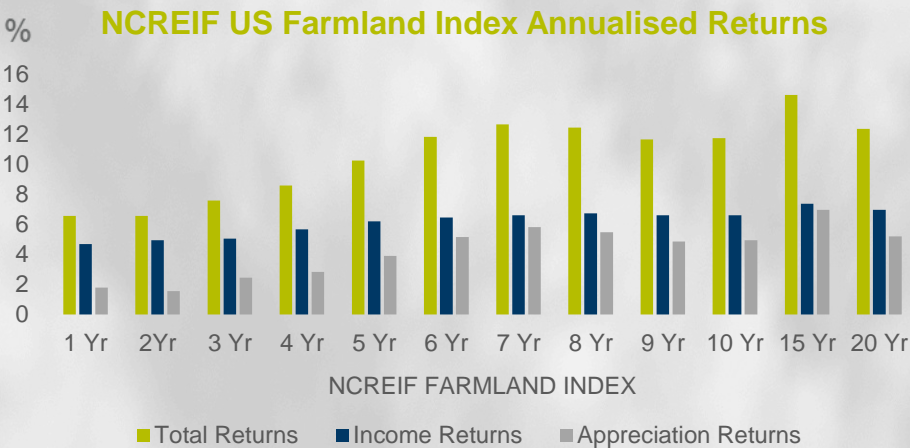
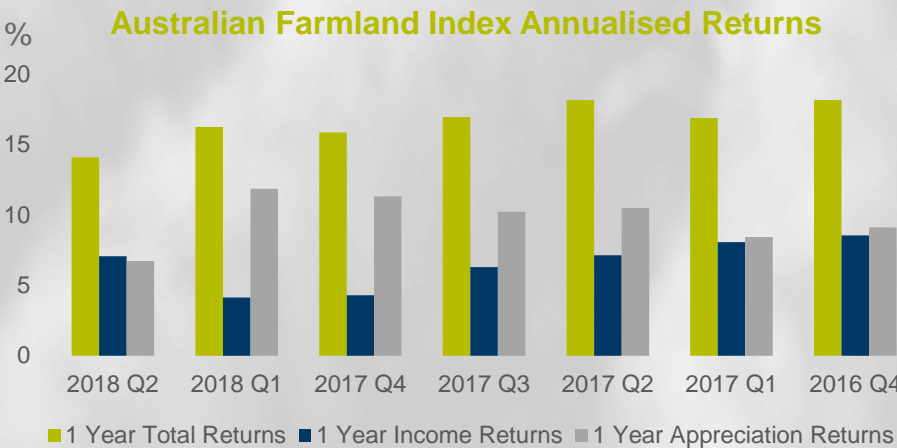
SUPERANNUATION FUND INVESTMENT

- Slow pace of investment in agriculture
- Only 0.3% of superannuation funds is invested in agriculture
- Lack of understanding of the sector
- Volatile nature of returns
- Small scale of domestic funds relative to US and European funds
- Lack of reliable statistics on which to base investment decisions
- ABARES data doesn't cut it

“meaningful and independent data is not available for experts to compare agricultural performance.” Industry Super Australia

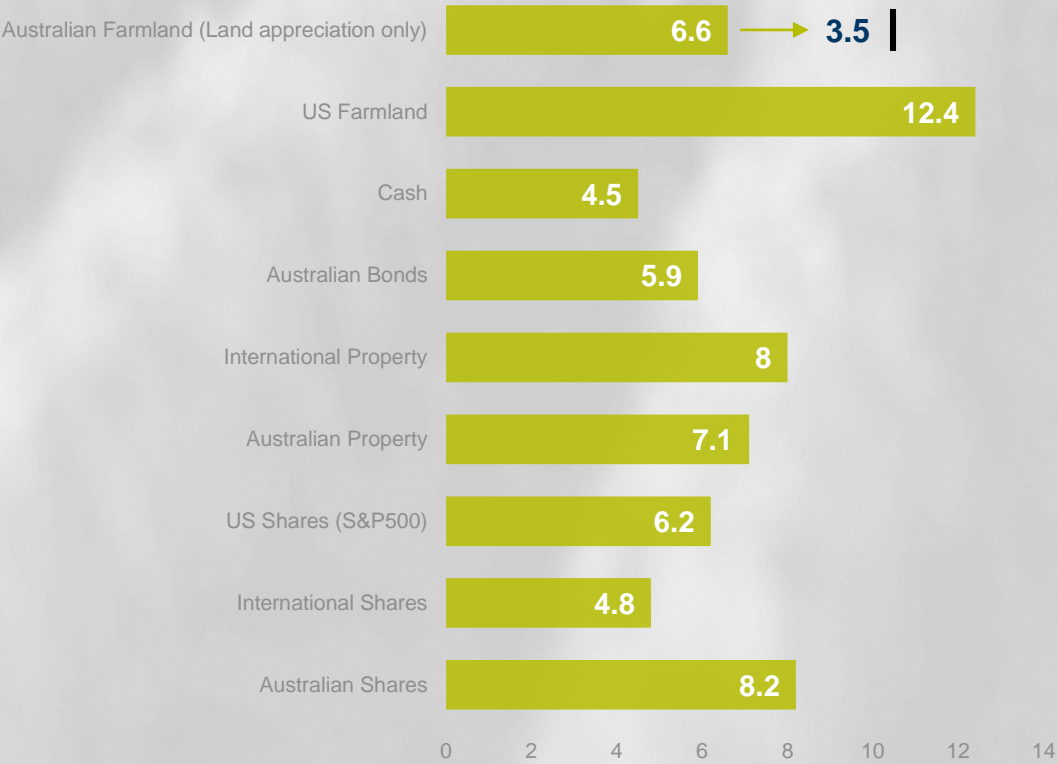
THE AUSTRALIAN FARM INDEX

A consistent and credible performance indicator



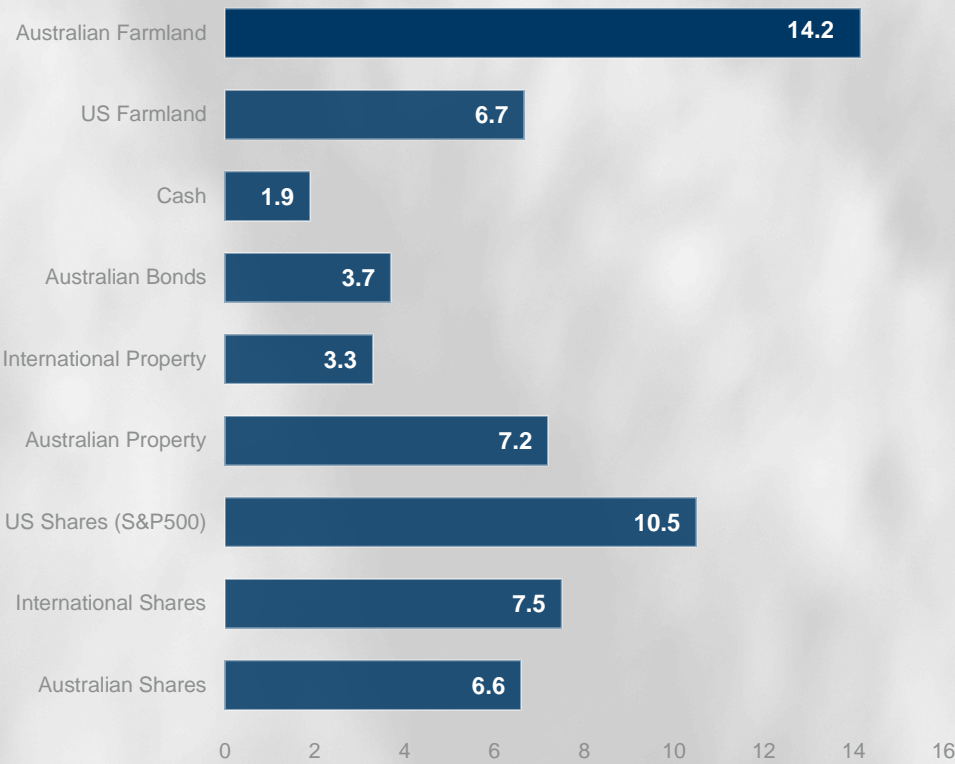
OUTPERFORMED OTHER ASSET CLASSES

Gross returns for various asset classes 20 years to Dec 18



insights.vanguard.com.au /NCREIF Farmland Index/Rural bank Ag Answers 2018

Gross returns for various asset classes 3 years to Dec 2018



insights.vanguard.com.au/NCREIF Farmland Index

NEGATIVELY CORRELATED TO OTHER ASSET CLASSES

Correlation Matrix – 10 years

	Ag Land	Developed Equities	Emerging Equities	Property	Cash	Bonds
Ag Land	1.00	0.55	0.55	0.41	0.19	0.02
Developed Equities		1.00	0.89	0.72	0.45	0.16
Emerging Equities			1.00	0.67	0.44	0.13
Property				1.00	0.12	-0.02
Cash					1.00	0.77
Bonds						1.00

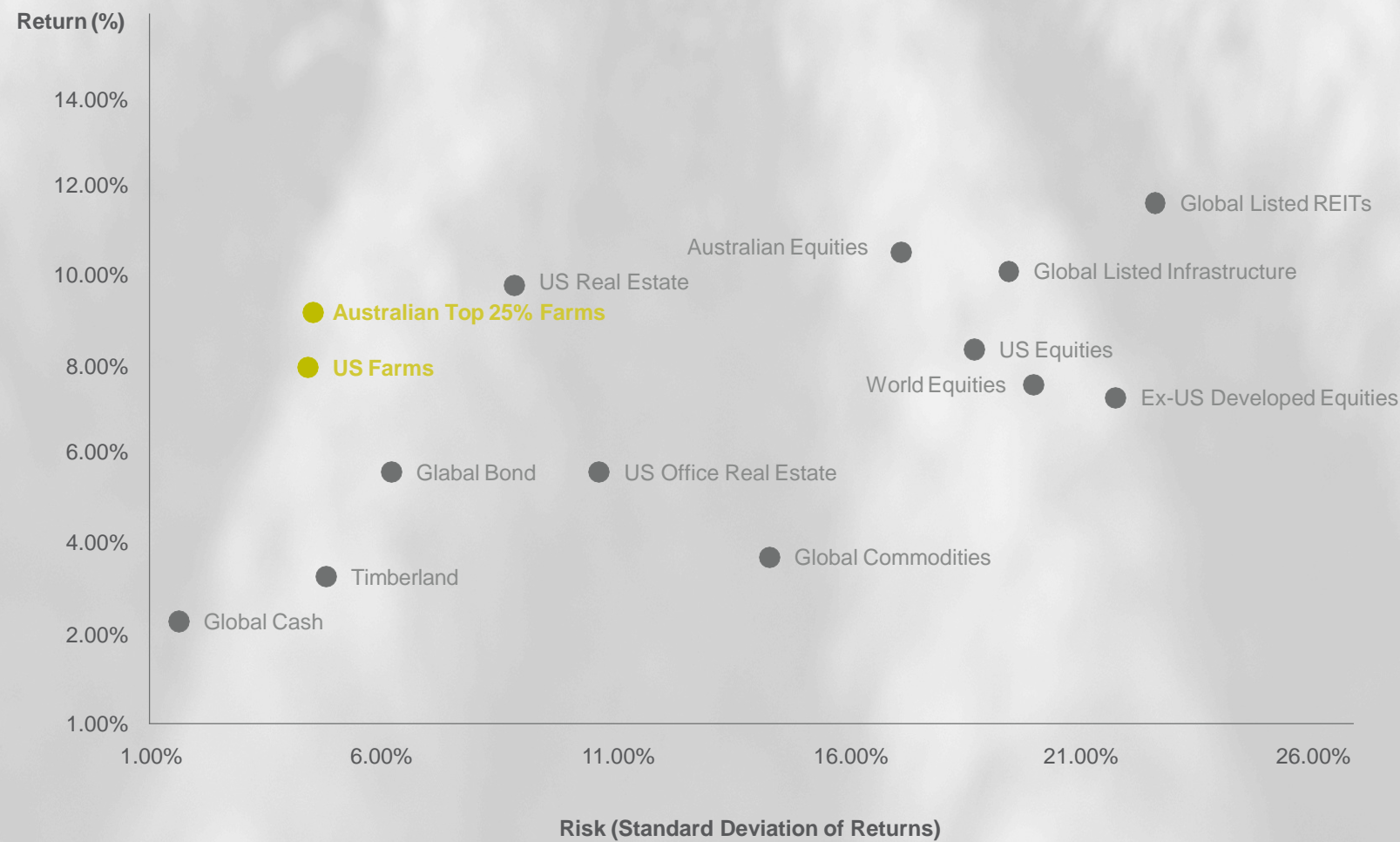
Correlation Matrix – 5 years

	Ag Land	Developed Equities	Emerging Equities	Property	Cash	Bonds
Ag Land	1.00	0.51	0.54	0.36	0.24	-0.03
Developed Equities		1.00	0.91	0.77	0.63	0.29
Emerging Equities			1.00	0.65	0.63	0.25
Property				1.00	0.23	0.06
Cash					1.00	0.69
Bonds						1.00

SOURCE:Macquarie Agricultural Funds Management. Food for thought

STRONG RISK-ADJUSTED RETURNS

Asset Class Risk and Return (1998-2015)



A person wearing a red plaid shirt is holding a tablet computer in a field of tall green crops. The sun is shining brightly in the background, creating a warm, golden glow. The person's hands are visible, with one hand holding the tablet and the other pointing at the screen. The background is a lush field of tall green plants, possibly corn, with the sun low on the horizon, creating a strong lens flare effect.

OTHER BENEFITS

- Positive correlation to inflation
- Less sensitive to economic shocks
- Tactile assets
- Vertical integration
- Easily upscaled
- Highly skilled workforce

ISSUES WITH INSTITUTIONAL INVESTMENT

Can get bogged down with decision making due to investment and strategic processes

- *Decision making less nimble and very complex*

Added layers of management in a corporate farming structure

- *Can delay timing of investment and operational decisions*

High degree of specialisation

- *Return risk due to commodity downturn*

CORPORATE FARMS:

- Higher fixed costs but lower variable costs
- Can invest more heavily in technology and management
- Negotiate volume discounts and premiums
- Have access to cheaper capital



WHERE DOES AGRICULTURE SIT IN AN INVESTMENT PORTFOLIO?

The challenge is that it isn't always clear how an agribusiness fits into an established portfolio

Traditional Portfolio: Equities, Real estate, Infrastructure, Private equity, Fixed income

Agribusiness??

Often composed of elements of more than one category:

- Real estate component
- Operational component
- Commodities component

Not easy to simply add it to a portfolio, especially considering it will often encompass such a small part of the overall fund



An aerial photograph of a vast agricultural field, likely a cornfield, showing distinct rows of crops. A combine harvester is visible in the center, moving through the field and leaving a trail of harvested grain. A small blue truck is parked in the lower left corner. The field is divided into sections by straight lines, and the overall color is a warm, golden-brown.

INVESTING IN AGRICULTURE

- Buy into established listed equities or private companies
- Futures and related financial instruments
- Direct investment: Own and operate or strategic partnerships
- Direct investment: Own and lease



WATER

- Historically, water entitlements were part of the land
- Now a separate tradeable asset
- Water freed up to be utilised for highest need
- Created an active temporary water market



TECHNOLOGY IN AGRICULTURE

Technology will play a major role in increasing productivity

- Big data
- Internet of things
- Remote monitoring
- Plant and animal genetics
- Sustainable farming practices

AG-TECH

**SproutX –
Australia's first Ag-tech Accelerator**

Their portfolio includes:

Agmesh

Enviroeye

Platfarm

Agriunity

Water Save

CSIRO – Virtual Fencing



EnviroEYE



Platfarm 



SOCIAL RESPONSIBILITY = SUSTAINABLE FARMING

The greatest social impact agricultural businesses and investors can have is providing food and developing sustainable food systems to feed the world.

Sustainable agriculture will result in:

- Vibrant rural communities
- Profitable agricultural systems
- Conservation of the natural environment
- Protection or enhancement of the resource base
- Net impact on the environment will be positive
- Meet community expectations with regard to environmental quality, animal welfare and food safety
- Maintain or enhance local and international competitiveness



ENVIRONMENTAL SOCIAL GOVERNANCE

A natural fit with agricultural investments

Climate Change:

The number one ESG issue globally

- Climate variability will continue to have a significant impact on Australian agriculture
- We must get the policy settings right





THANK YOU

