

AgFutures

Innovation & Investment Forum

21 November 2018

Showcasing agri-technology and investment in agriculture

AgriTech Commercialisation – An Investment Perspective

Mark Rainbird – Managing Director, BlueMount Capital



Discussion

- Innovation / Commercialisation Pathways and Issues
- Funding Options and Exit Strategies
- AgriTech and Market Observations
- Investment Examples
- Venture and Accelerator Agri-Tech Players
- Recent / Current Agri-Tech Deals
- Summary

Farm Tech Category Definitions



Ag Biotechnology

On-farm inputs for crop & animal ag including genetics, microbiome, breeding, animal health



Farm Management Software, Sensing & IoT

Ag data capturing devices, decision support software, big data analytics



Robotics, Mechanization & Equipment

On-farm machinery, automation, drone manufacturers, grow equipment



Novel Farming Systems

Indoor farms, aquaculture, insect, algae & microbe production (excludes consumer home grow kits)



Agribusiness Marketplaces

Commodities trading platforms, online input procurement, equipment leasing used by farmers



Bioenergy & Biomaterials

On-farm ag waste processing, biomaterials production, anaerobic digesters (excludes supply chain companies)



Farm-to-Consumer eGrocery

Online platforms for farmers to sell and deliver their produce direct to consumers



Miscellaneous

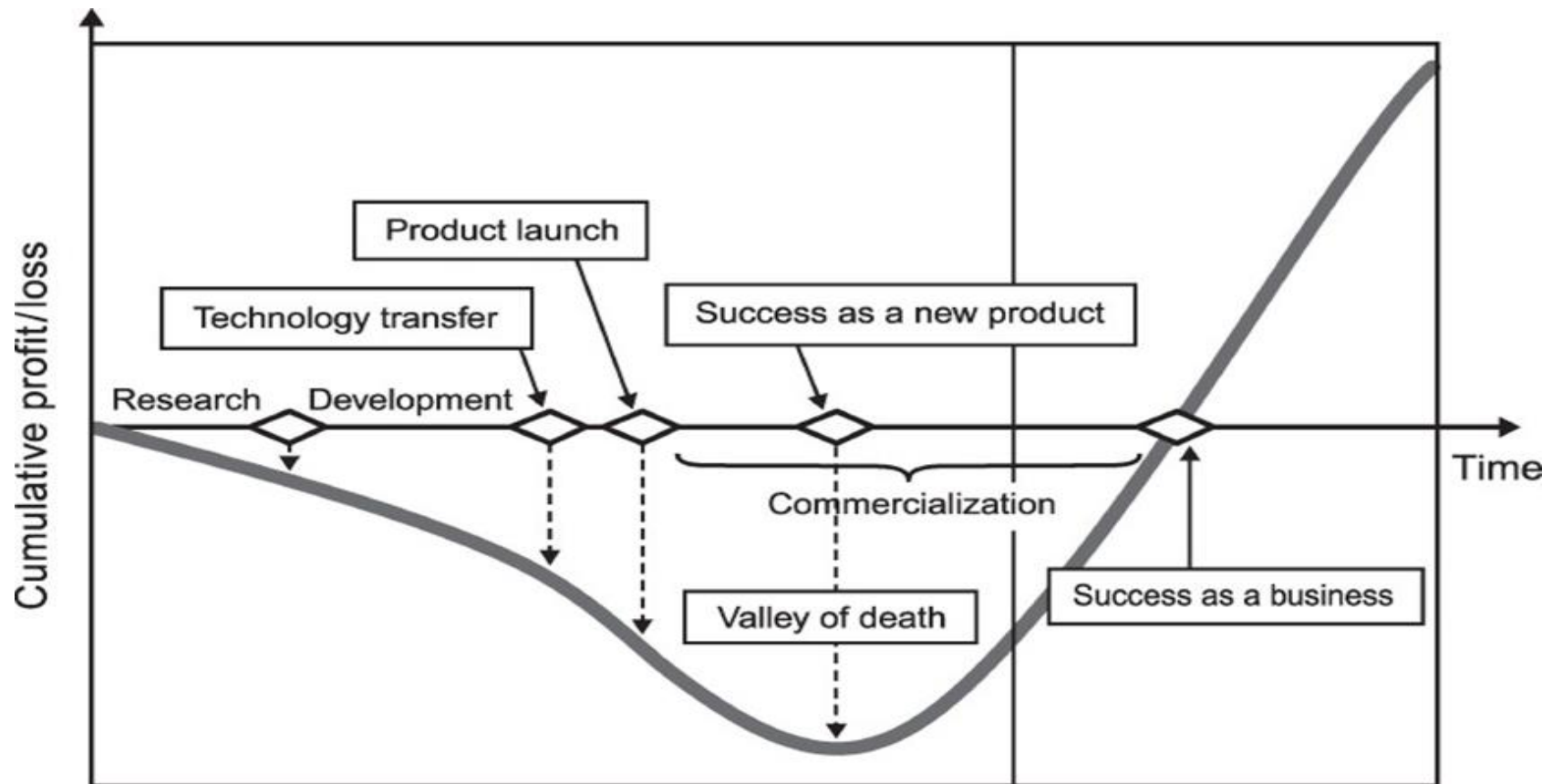
Land management tech, financial services for farmers, etc.

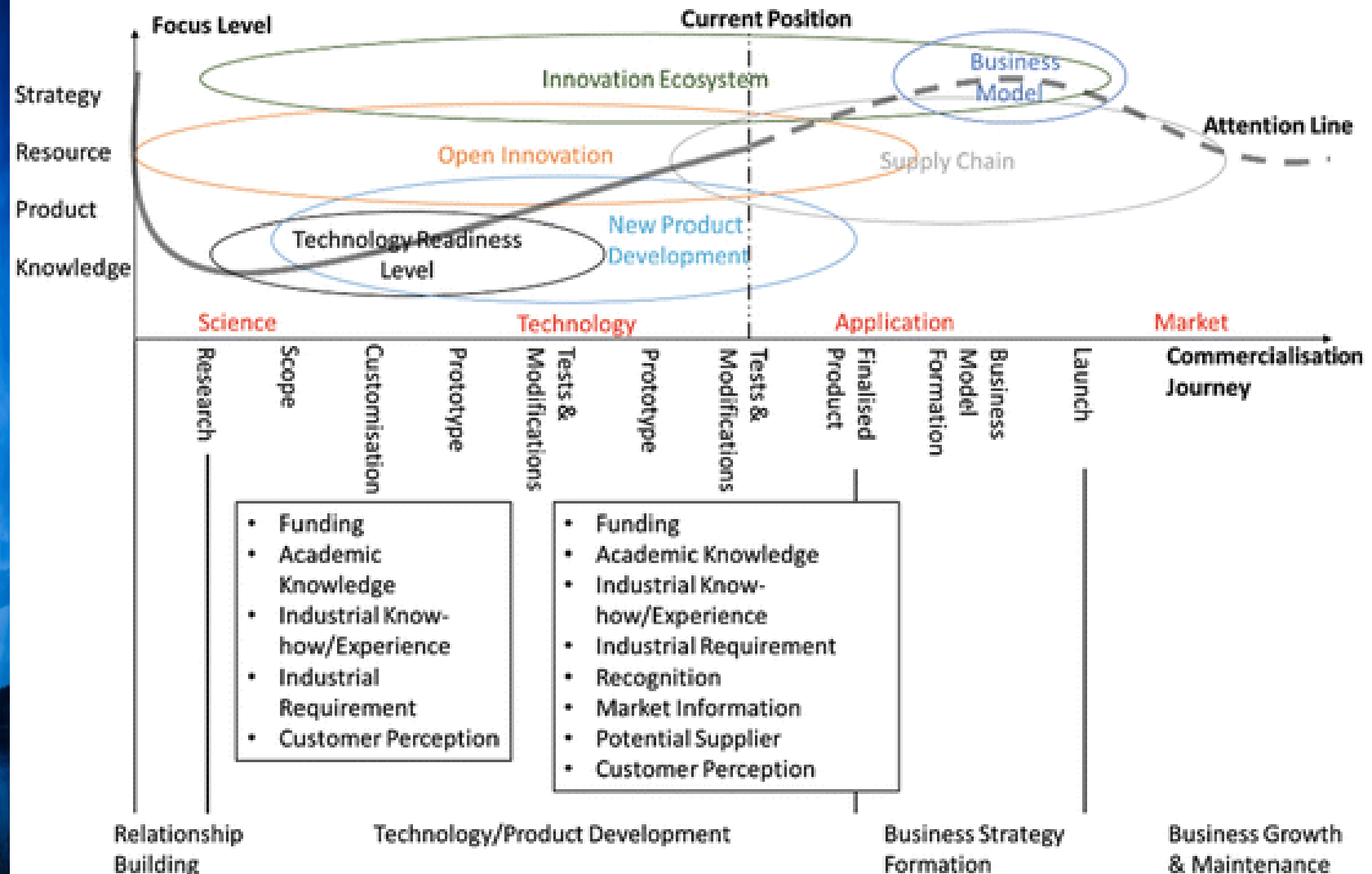


Innovation – Agriculture, Forestry and Fishing (ABS, Jul 18)

- Approx. 17-18% of Agri business are innovating
 - This is broadly in line with other industries
- Factors preventing or limiting collaboration:
 - Insufficient funds (14.2%)
 - Insufficient time (13.3%)
 - No expected benefit (8.8%)
 - Govt regulations or compliance (5.0%)
 - Lack of skills within the business (4.9%)
 - Unable to find a suitable partner (4.4%)
- We note that funding assists with resourcing and probably helps with all of the other factors.

The Commercialisation Process





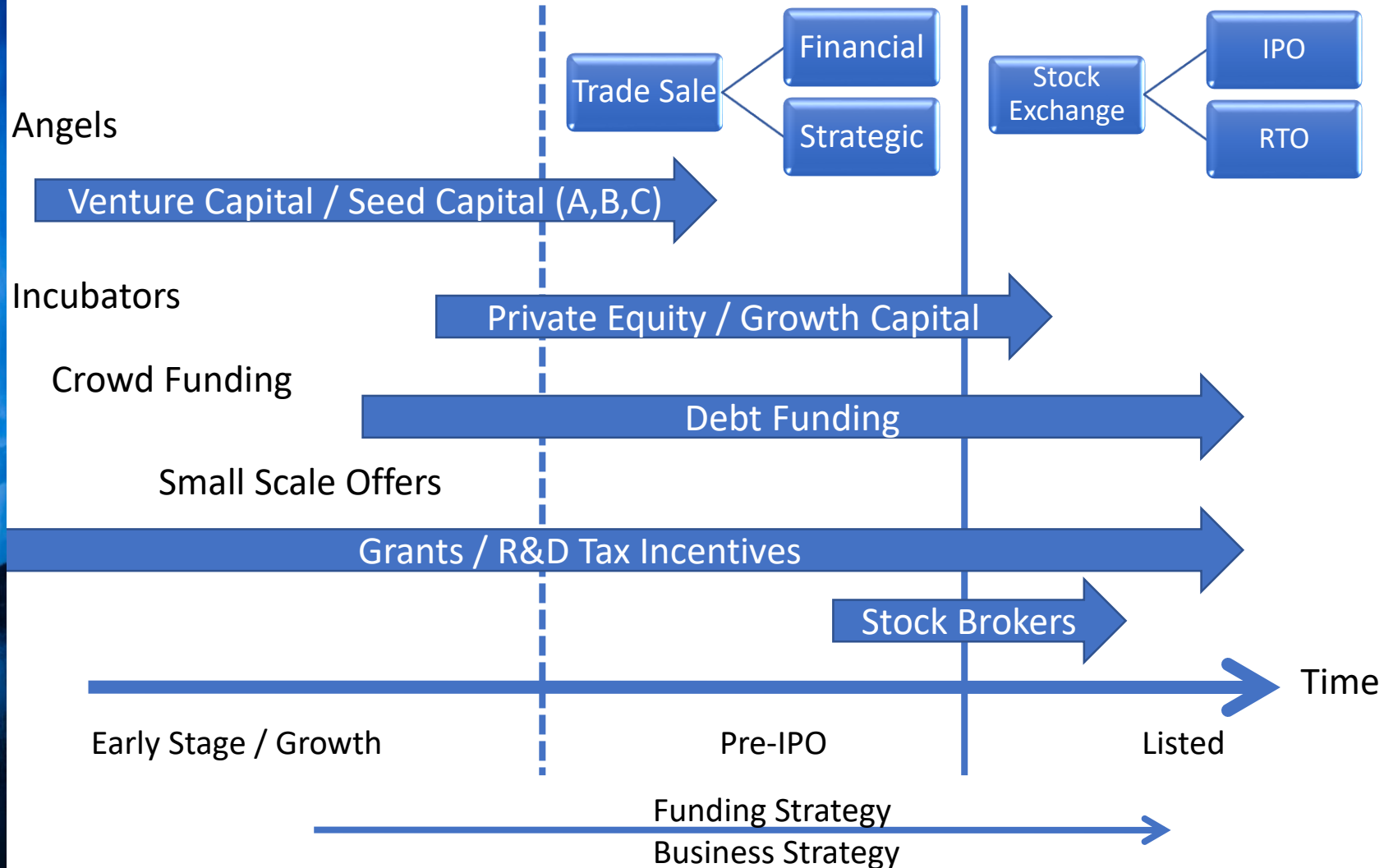
Ref. Farrukh, C et al., 2106. Commercialization Journey in Business Ecosystem: from academy to market.



Issues in Commercialisation

- Bridging the funding gap
 - R&D to commercial development e.g. Technology Commercialisation Fund (Qld Govt);
 - Scale-up-funding e.g. seed capital – Series A,B & C
 - Debt funding
- Lack of collaboration (stakeholders)
- Market knowledge (quite often proprietary/confidential); pricing; offtake; supply chain issues
- Business model development (usually takes a few iterations)
- Global scaling / market penetration (especially for technology businesses)
- Lack of experience / knowledge on funding options / pathways

Funding Options and Exit Strategies





Agri / Tech Funding Observations

- Land asset values are less “bankable” than in other industries due to the rural nature of operations;
- Plant and equipment (just like other industries) have generally been depreciated;
- Trialling of technologies can take a number of “cycles” – cropping may take a number of seasons
- Development of plant based systems can take many years to optimise yields, and supply chain / retails “food related” / consumer issues eg. packaging / colour / other characteristics ...
- It takes time to build a market and test end user acceptance / pricing etc.,
- Cash flows for farms are much more variable and uncertain than for most other businesses.
- Supermarkets generally do not contract suppliers leading to offtake uncertainty



Market Observations

- Agri venture investment are a small proportion of overall venture investment (Agri investments - 8% “other” <https://www.avcal.com.au/documents/item/610>)
- Depth of capital funding in Australia limited (compared with global)
 - Govt: As part of the \$1.1 billion [National Innovation and Science Agenda](#), the Australian Government has allocated (Fed Govt); cf. Samsung to invest about \$22B in AI, other technologies over three years (<https://thefly.com/landingPageNews.php?id=2773431&headline=SSNLF-Samsung-to-invest-about-B-in-AI-other-technologies-over-three-years>)
 - Venture: 2016 Global VC Investment was approximately \$125B vs \$262m for Australia (Greenspring Associates, 2017)
- Venture capital funds generally moving to “late stage” (lower risk)
- Equity Crowd Funding immature (limited crowd and restrictions on retail investors)
- “Small Scale Offer” Class Order exemption expires in March 2019

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OPINION

Nov 14 2018 at 1:51 PM

Updated 52 mins ago

☆ Save article

A \$2 billion end to the SME funding drought

✉ G+ f t in



Small businesses having trouble securing finance

by Mark McKenzie and David Gandolfo

Small business owners generally run away from discussions on financing because they are always so complicated, but it is suggested that small business owners should openly embrace [the SME financing measures announced by the Morrison government with both hands.](#)



Market Observations

- FIRB changes to agricultural investments. Mixed reaction from agents to new FIRB rural selling rules (<https://www.afr.com/real-estate/commercial/sales/mixed-reaction-from-agents-to-new-firb-rural-selling-rules-20180201-h0sajp>)
- Climate change will affect land and water values as well as the price of carbon (<https://www.ausbanking.org.au/banks-in-australia/environment>)
- Banks are encouraging drought affected businesses to contact them with respect to assistance such as deferring loan repayments and fees or restructuring facilities. (Jul 18 <https://www.ausbanking.org.au/media/media-releases/media-release-2018/help-on-offer-for-drought-affected-farmers>)
- Full ramifications of Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry still yet to be felt
 - Australian Banking Association seeks to overhaul code of practice after royal commission fallout (Oct 18 <https://www.abc.net.au/news/2018-10-10/australian-banking-association-seeks-overhaul--code-of-practice/10357454>)
- Australia's banking regulator flags higher capital requirements (Nov 18) (<https://www.reuters.com/article/us-australia-banks-regulator/australias-banking-regulator-flags-higher-capital-requirements-idUSKCN1NC2ZB>)

Bad internet, lack of support hampering Australian agritech growth



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ABC Rural By Clint Jasper

Posted 23 May 2016 at 3:54 pm

With investment projected to hit \$4 billion next financial year, the emerging agritech sector is increasingly attracting attention from venture capitalists and tech-focused start-up companies.

But faced with regional Australia's poor telecommunications and internet, many of Australia's best and brightest are being lured to the United States to launch their businesses.

Those involved locally and overseas believe it is an exciting time to be on the scene, encouraged by the **Government's innovation statement** and **attention from overseas investors**.

Melbourne-based company Observant launched in 2003, and makes remote water and livestock monitoring equipment.

With thousands of devices across the country, it has had to rely on old-fashioned radio communication technology to get data from the devices.

Founder and chief technology officer Matthew Pryor would rather be on a 3G or 4G network.

"Many of our devices are in locations where connectivity was very difficult to achieve, so we've done that privately with technology that's built into our units," he said.

"But the most successful and the easiest path is when that connectivity is already there.

"We don't want to build that privately. That needs to be an investment that we make as a country."



Australia has a growing need for technology to make the agriculture industry more productive. (ABC Rural: Clint Jasper)



Observant founder Matthew Pryor and Findex's Thomas Paule discuss the exciting opportunities in Australian agritech (ABC News)

Investment Examples

Date	Target	Description	Est. Value \$M
Aug, 18	Agriwebb Pty Ltd. (30% Stake)	An Australia-based developer of farm and livestock management software https://www.agriwebb.com/	14
Sep, 17	Blue River Technology (USA)	Building smart farm machines to manage crops at a plant-level – computer vision and robotics; http://www.bluerivertechnology.com/	382
Nov, 17	Integrated Packaging Group	manufacturer and distributor of stretch film wrap and associated products for industrial and agricultural applications (twines, silage films, mulch film, bags ..)	178
Nov, 17	Botanical Resources Australia Pty Ltd	A global leader in the production of the natural insecticide active ingredient, Pyrethrins, extracted from Australian grown pyrethrum daisies. https://www.botanicalresources.com/	177
2017	Farmapp	Farmapp is revolutionising food production management by helping growers embrace technology. https://farmappweb.com/	0.1

Investment Examples



Date	Target	Description	Est. Value \$M
April, 17	The Yield	Provides sensing solutions for agriculture and aquiculture https://www.theyield.com/	6.5
July, 17	Penty Inc (US example)	Indoor vertical farming next to cities - grows crops indoors on six-metre-high vertical poles. No pesticides. 1% of land. Yields x350 cf traditional farming. https://money.cnn.com/video/news/2018/02/07/plenty-indoor-vertical-farming.cnnmoney/index.html	257
March, 16	SST Australia	Australia's leading supplier of adjuvants and spray additives to the agricultural sector http://www.sstaustalia.com/	NA
Dec, 14	Sundrop Farms Advisors	Horticulture using saltwater and sunlight. Sundrop Farms is a global leader in sustainable agriculture, growing fresh fruits and vegetables using renewable inputs http://www.sundropfarms.com/	119

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AGRITECH GROUP MAKES £8M AUSTRALIAN INVESTMENT

Chester-headquartered Wheatsheaf Group has taken a minority stake in AgriWebb

• Bc Investment

• BC Cloud Services

Katherine Lofthouse

12:44pm 23rd Aug 2018



AgriWebb management team

UK agritech investor Wheatsheaf Group has taken a minority stake in Australian group AgriWebb following an £8 million investment.

Wheatsheaf has also sold its livestock and dairy software firm FarmWizard, based in Belfast, to



End to end sensing

Today's Forecast
(midnight - midnight)
 15.0 mm

Delta T: 1.5

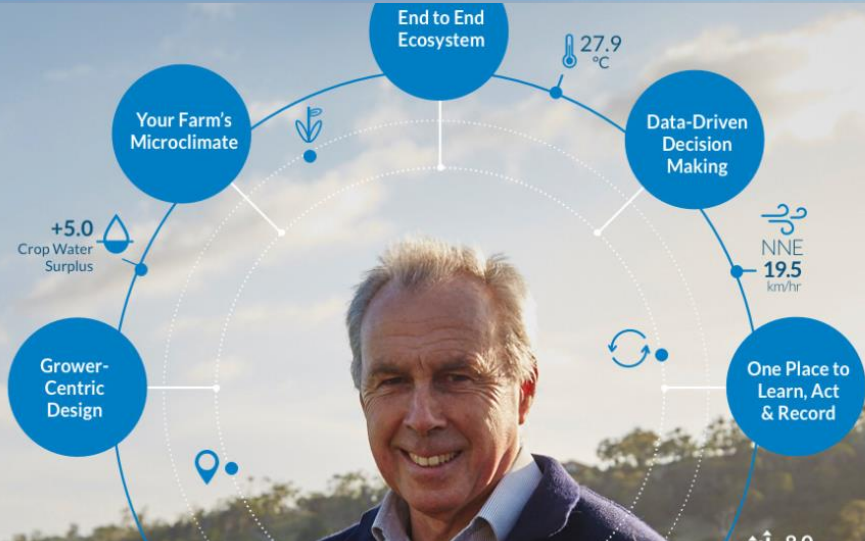
CURRENT GROWTH STAGE
Bud Burst

CROPPED AREA
22.8 ha

ESTIMATED YIELD
240 tonnes

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Australian Venture and Agri-Tech Accelerators

- Sproutx – accelerator (FindEx)
- SparkLabs – a global agriculture and food technology accelerator. SparkLabs Cultiv8 invests up to A\$100,000 in startups in exchange for an agreed equity position. <https://www.sparklabscultiv8.com/>



Accelerator **Portfolio** Team Spotlight Insights

2018 Portfolio



AgMesh is a startup focused on IoT (Internet of Things) assisted farm management and productivity solutions across grazing and mixed farms.

[Go to website](#)



Checkpoint Tools connects experts in biosecurity to provide reputable answers to any question or image posted. It is the world encyclopedia for biosecurity.

[Go to website](#)



Edible Bug Shop is Australia's largest insect protein manufacturer and supplier, made possible through unique farming technology



EnviroEYE

EnviroEye is an integrated vineyard management platform with a unified view for monitoring, managing and planning.

2018



FEBRUARY 20, 2018

SproutX bolsters Aussie agtech innovation with global expertise



by SproutX

Agtech co-working space for entrepreneurs opens as SproutX completes first pre-accelerator intake with 100 national startup finalists

SproutX, a joint initiative between Index and the National Farmers' Federation, today welcomed Michael Dean, co-founder of global agtech platform Agfunder, to the board of the national agtech innovation hub, providing international expertise to Australia's newest agtech startups.

In a move to bolster the industry, SproutX also opened the nation's first co-working space dedicated exclusively to agtech startups. The space — which is free of charge for eligible startups — is the centre of agtech in Australia, designed to help foster new startups in Victoria and continue boosting the country's \$60 billion agriculture industry and support the next innovation boom through agtech.

"We're really excited to have finally opened our doors to some impressive startups in the agtech space," said Sam Trethewey, General Manager of SproutX. "Australia's biggest natural advantage lies in agriculture so this co-working hub is designed to connect innovators, investors and the agriculture community to help bring these new ideas to fruition."

Michael Dean, a co-founder of the world's largest agricultural crowd equity platform Agfunder, will bring more than 20 years of experience in the space to SproutX. Dean previously helped develop agribusiness opportunities in Africa through his business SeedRock Africa Agriculture.

Is the ag-tech boom ripe for Australian investors?

By Megan Graham. Published at Jul 26, 2018, in [Features](#)



Industrial agriculture provides food for millions, if not billions, of people across the globe — but this is an industry that is facing serious and well-publicised challenges.

Food demand is set to soar with the world's population projected to reach an estimated 9.7 billion by 2050. A new generation of middle-class consumers are set to upgrade their diets, including increased consumption of meat (which is grain-intensive).

In addition, declining arable land and salinity issues, and problems with water access, as well as pest and disease problems, are keeping farmers on their toes — at least, those who haven't yet been forced out of the industry altogether.

Where there's a problem, however, there's an opportunity, which is why we're seeing the rapid expansion of what's known as ag-tech — digital technologies made specifically for the agricultural industry.

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Australian Venture Capital report: Bush cities ripe for agritech



Alex Druce

[@AlexDruuce](#)

15 Jun 2017, noon

News



NSW Farmers chief executive
Matt Brand:

He said while tech startups, generally, were predicted to add up to \$109b GDP and 540,000 jobs by 2033, the key to investments in agritech “will be the ability to create on-farm value not only to assist in driving efficiency, but to help with Australia’s competitive advantages such as high quality food and fibre.”



Types of Agri deals we encounter

- Large agricultural enterprises – being sold (protein / non-protein)
- Funds / private equity / offshore funds – looking for capital / investee companies / roll-ups
- Agricultural Companies
 - Expansion / scaling
 - Accessing new markets
 - Creating new products
 - Extending the shelf life of products
 - New cropping opportunities – Guayule, cannibas ...
- Technology looking to maximising “waste” materials to supply new products / create new industries / markets
- Agricultural equipment
- Greenfield projects:
 - Renewables / biomass / waste-to-energy / biofuels

Project Boletus

- Project Boletus is a profitable Australian company that grows and wholesales swiss brown, cups, white button and flat mushrooms.
- The Company is seeking to establish a new composting and farming operation at a recently purchased property. This venture will require investment around \$23m and will result in expansion and cost-cutting.
- The owners have positioned the business well for the proposed expansion to the new facility, laying solid foundations, building good predictable cash flow and generating consistent profits.
- Current status: Already have 3 interested parties who may put in either debt and/or equity.



The BioCube Corporation

- The BioCube™ is a self-contained biodiesel mini-refinery engineered within a specially modified 20' sea container. It can operate independently from the electricity grid and converts a wide variety of feedstock vegetable oils to useable biodiesel.
- Recently The BioCube Corporation has entered into an agreement with a Canadian listed company to use it's BioCube Processor, to process Omega 3 products (from Flaxseeds).

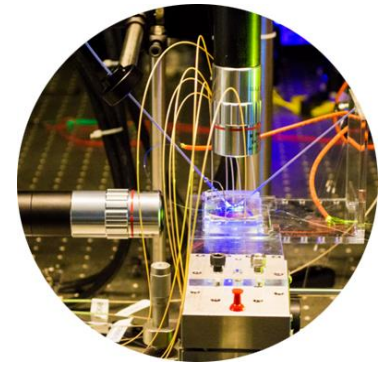


Qponics Limited



- Qponics Limited is an agribusiness planning to apply state-of-the-art technologies to produce algae in a large scale commercial outdoor raceway pond farm to be constructed on a 167.5 hectare property in northern New South Wales.
- The Company will produce algal omega-3 oils and in the future other high value algal products for sale onto the global wholesale market. Qponics' products will be produced using a sustainable and mostly automated process free of toxins known to contaminate fish oil and will be ideal for consumption by vegetarians and vegans and the broader consumer community.
- Based on the latest known information, Qponics will be the only company producing or preparing to produce algal omega-3 oils that can claim to be:
 - vegetarian, Australian-made, and sustainably produced in a semi-urban environment.
- The Company is planning for an IPO on a suitable Australian exchange in 2019.

Project Genus

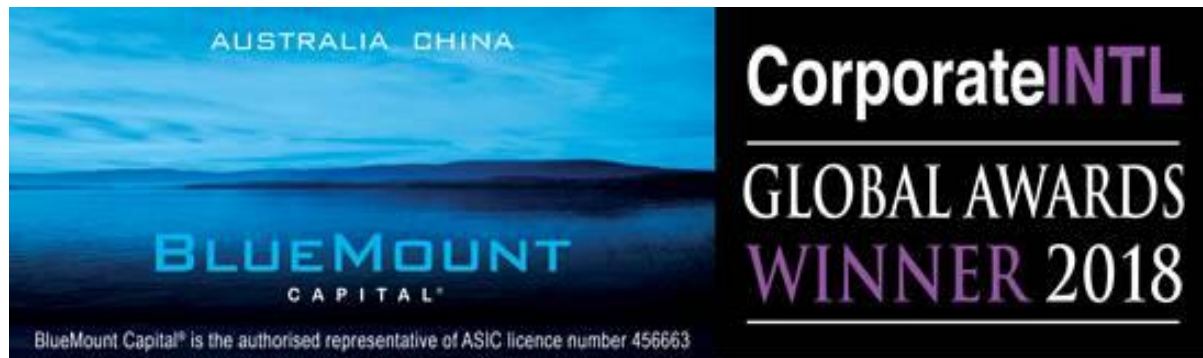


- Project Genus is a New Zealand company that has developed a proprietary process to separate bull sperm cells by sex, enabling dairy farmers to choose the gender of calves. Project Genus has secured investment and resources from three of the world's largest artificial insemination companies. Each are providing funding, scientific resources and facilitating trials of the technology in exchange for an option to license for certain countries.
- Project Genus has confirmed its technology's ability to select X-chromosome bearing (female producing) bull sperm cells. Project Genus' key patent has been allowed in the US and Australia and is expected to issue in other major dairy markets globally.
- Project Genus has secured the support of three of the world's largest bovine artificial insemination companies which are backing Project Genus in multi-stage deals.
- Current status: Still seeking investors for this opportunity



Summary

- Agri businesses are innovating and Agri-Tech is a vibrant sector
- Commercialisation issues are known and we need to build the right supportive ecosystems
- Agricultural and Agri-Tech businesses have industry specific issues (compared with other industries)
- Funding is difficult (both debt and equity) and Agri-Tech businesses need the right advice, funding strategies and funding to grow
- Deals are getting done and good Agri-Tech businesses are looking for capital
- We are optimistic about the sector and the opportunities to improve the yield, efficiency, and profitability of the Agricultural sector and utilise the innovations being developed



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