DIGITAL AGRICULTURE SERVICES

- 1. Who is DAS?
- 2. Live Demo of the DAS Rural Intelligence Platform<sup>™</sup>
- 3. Graincast 2019 Results
- 4. Graincast 2020 Plan plus some new science to monitor productivity...every 7 days!
- 5. Engagement Models

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#### **THE PROBLEM**

# A perfect storm is unfolding thanks to rural data that is just not good enough.



CHALLENGE 1 Feeding a growing population

CHALLENGE 2 Providing a livelihood for farmers



CHALLENGE 3 Protecting the Environment



A top global industry that is also known as the world's least digitised

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Source: Food & Agriculture Organisation of the United Nations (FAO). Based on the gross value of global agricultural production Source: McKinsey Global Institute, MCI Industry Digitisation Index. Note: Most recent Tigures are: Source: OECD Org/Agriculture 2019

# Our vision is to create the world's leading rural intelligence company

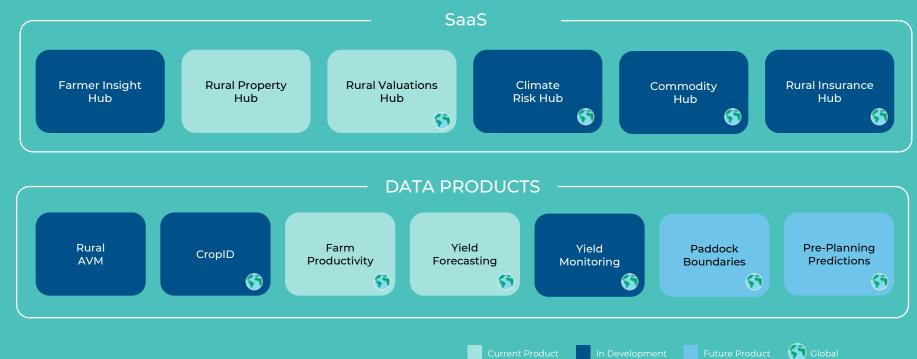
...starting in Australia



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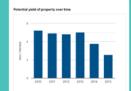
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### Dedicated Software-as-a-Service (SaaS) and data products





hectares









Average Annual Rainfall **393** mm /year







Approximate arable area 896.60 hectares

#### RURAL INTELLIGENCE PLATFORM<sup>TM</sup>

Full access to hundreds of rural, agri & climate analytics. All in one place.







Dry Wethers (DSE) One DSE (Dry Shape September) is the amount of failed requiring to maintain the weight of a 25 spectra started Method Temp I. Notices that carrying capacity is four started by a second or story produced on the started started by the distribution to method by 100 or of million, where one DSE is





Long-term average potential yield

4.54 tons / hectare



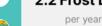
• Sperse woody (464 har / 65) • Non-woody (373 har / 55) (8013 har / 80%)













#### Industry Need | The key questions



What is the likely planted area for the coming year?



How is the growing season progressing and how does it compare to previous years?



Has extreme heats impacted flowering?



Who has been impacted by frost?

Hc sea im

How is growing season rainfall impacting yields?



What has been the impact on yields of climate? Hail? Severe storms?



What is the likely demand for fertiliser during the year?

egrates three key technologies, CropID, C-Crop Is plans in Australia and India to be confirmed



What is likely yield at paddock, farm, region, state and continental scale?



What farms and region are suffering drought?

Commodity Hub Product | Overview

In 2019 DAS and CSIRO integrated unique IP and technology<sup>1</sup> that enables the precise, accurate and rapid identification of crop type and prediction of yield at a farm, regional and national scale



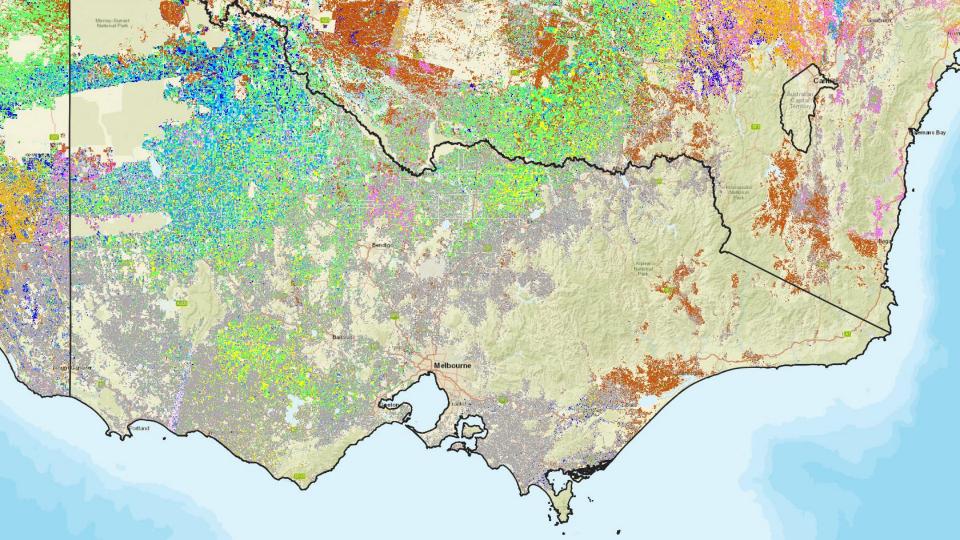


Graincast Web and Mobile Application

Combining this with the DAS Rural Intelligence Platform, further CSIRO research and investments in advanced analytics we are targeting the release of DAS Commodity Hub focussed on pulses and grains<sup>2</sup>

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Note 1: The Graincast product suite integrates three key technologies, CropID, C-Crop and the Graincast App Note 2: 2020 plans for pulses and grains plans in Australia and India to be confirmed



**AUSTRALIAN INNOVATION** | DAS and the CSIRO

In 2019 we used field surveys and AI to create crop maps & yield predictions for the Australian Winter 2019 cropping season – 30 plus crops including wheat from barley

Classifying crops at farm, regional & national scale - In 2019 we covered...

60.000+



Kms travelled

PhDs/Teams on the road



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#### GRAINCAST | Results 2019 versus 2017 & 2018

Over the last 3 years the precision and accuracy has improved substantially against available benchmarks<sup>1</sup>

#### Crop Area (CropID)

Year	Canola	Wheat	Barley	Wheat & Barley & Cereal (unspecified) as Wheat
2019	130.13%	104.32%	98.06%	102.57%
2018	98.72%	110.15%	79.33%	101. <b>7</b> 9% <sup>5</sup>
2017	110.59%	93.16%	216.98%	76.46% <sup>6</sup>

#### Crop Yield (C-Crop)

Year	Canola	Wheat	Barley	Wheat & Barley & Cereal (unspecified) as Wheat <sup>2</sup>
2019	123.88%	101.93%	88.28%	97.38%
2018	114.88%	116.17%	75.70%	103.86% ***
2017	94.58%	49.9% <sup>3</sup>	175.6% <sup>4</sup>	89.89% ****

Notes:

Note 1: We have benchmarked against official ABARES.

Note 2: Cereal (unspecified)" is a classification used only in 2017

Note 3: Wheat yield figure assumes that all "cereal unspecified" areas are wheat

Note 4: Barley yield figure assumes none of the "cereal unspecified" areas are barley

Note 5: Figure taken by summing yields for wheat and barley and comparing to summed ABARES yields. This is done due

to the level of model confusion between barley and wheat. However, as historical barley and wheat yields differ by 20% on average within a single state and growing season, this approach is prone to errors.

#### LIVE Demo | DAS Rural Intelligence Platform<sup>TM</sup>

VISIT DIGITALAGRICULTURESERVICES.COM or <u>https://map.digiag.io/</u>27

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#### **GRAINCAST** | Winter 2020 Plan

## Over 2020 we will be launching the DAS Commodity Hub and making this available to commercial clients

	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Crop Identification (CropID)	Release	Pulses Heo	ctares Plante	Release of i		classification ne top 30 Cro for Wh					
2. Crop Yield Forecasting			Cr	op Yield Pred	iction using A	APSIM - Availal	ble every 2 we	eeks			
3. Crop Yield Monitoring				Cr	op Growth M	onitoring usin	Ig DAS NPP	- Available we	ekly		
4. Graincast Application			Launch Applicat	Graincast Fari ion	Launch Gr	none raincast Integr ce Platform	ration with D	AS Rural			
2020 R&D	Pre-processi 🗎	ng of broad-acre (	cropping bounda	ries	Automated P	addock Boundarie	s				
Winter Cropping	Planting			Growing			Har	vesting			

#### **Industry Need** | The key questions







How is the growing season progressing and how does it compare to previous years?



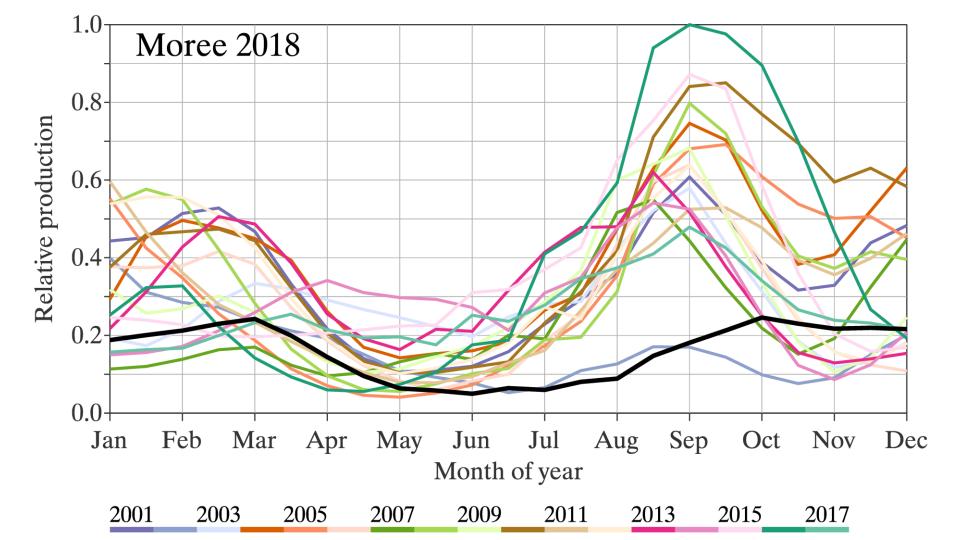


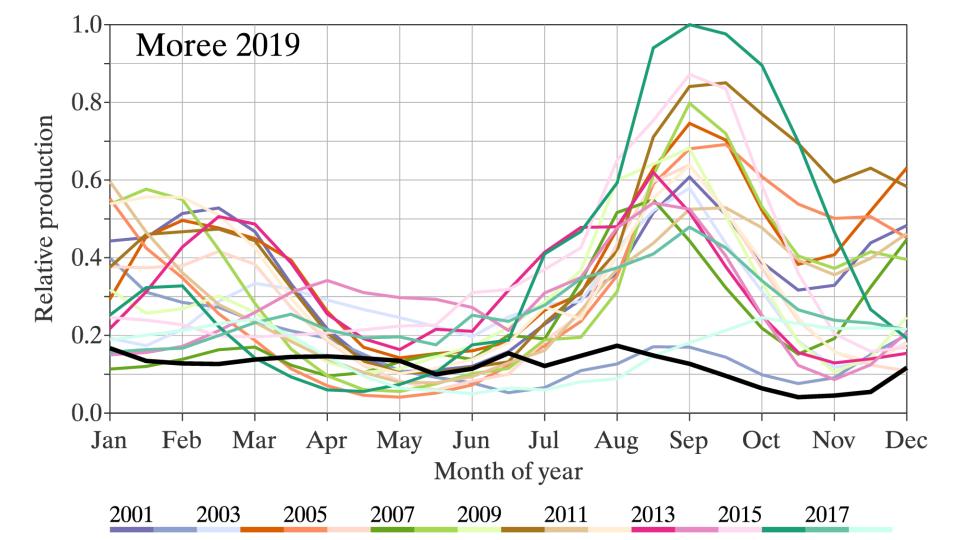


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#### Australia

Winter Crop Area

**19.1** M ha Based on 2019/20

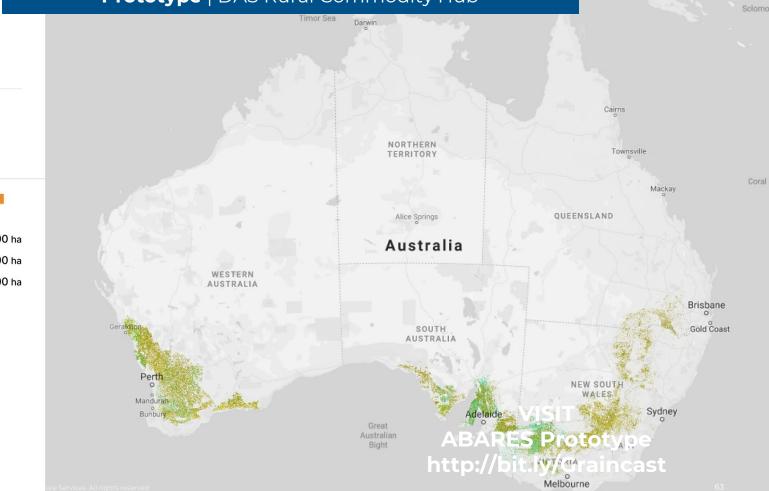
Winter Crop Production **33,866 kt** Based on 2019/20 (Wheat, Canolla, Barley)



#### Prototype | DAS Rural Commodity Hub

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Port Moresby



#### **GRAINCAST** | Winter 2020 Plan

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2020 R&D	Pre-processi	ng of broad-acre	cropping bounda	ries I	Automated P	addock Boundarie	25				
Winter Cropping			Planting	Growing					Harvesting		



### Delivering rural intelligence for a better world

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