

Testing, testing... say 'hay' to Hart's intern!

UPDATE 5

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The final edition



Brianna Guidera

Hart update from Brianna...

Hi everybody,

My 12-months at Hart are fast coming to an end, with just over one week left in my role as Regional Intern. While I know many of us were glad to see the end of 2020, I'm honestly scratching my head wondering where the time went. It certainly doesn't feel like a whole year has passed since I first joined the team, eager to see whether research really was my calling.

But, it seems like 2021 is already moving just as fast (if not faster!), so without wanting to waste anybody's time with a drawn out introduction, I'll get into it.

Since my last update, our lives have been a bit of a blur comprising of grain quality analysis, report writing, more grain analysis, Christmas and New Year holidays, and still, more report writing. These are coming along nicely though and are set for publication in Hart's Trial Results Book which will be released on March 10 at our [Getting The Crop In seminar](#).

The team have also been busy planning our trial program, events and workshops for 2021 and we look forward to sharing some more information about that with you soon.

Bek and I have also recently set up a new Rainfall Variability Trial for 2021; we've placed a number of rainfall gauges across the Hart site to compare the variation recorded over small distances. You'll see updates posted on our [Facebook](#) and [Twitter](#) pages throughout the growing season.

Next week we will be attending the Bayer Connect conference and the GRDC Updates in Adelaide, both of which I am very much looking forward to. For now, that's what is happening at Hart in February.

On to my focus projects...

- At the moment the team at CSIRO are busy analysing yield data for the **Soil and Plant Testing** project, so for now we don't have much to update on that trial.
- At the time of writing my last update I was yet to see the quality data for the **National Hay Agronomy (NHA)** project but the report is now finished and I have some quality data I can share.
- It also seems fitting that, seeing as this is the last blog I'll write, I should do a small review of my year with Hart, including some photos. Keep reading for more...



National Hay Agronomy (NHA)

Re-cap

In my last update we had harvested the trial and were waiting on hay quality data. At Hart, the oat varieties Brusher, Carrolup, Yallara, Wintaroo and Durack had high hay yields. Vasse, a long-season variety, was low yielding and struggled to push the head out of the boot.

Recently the hay quality data was analysed and below I have summarised the results of two quality parameters: Neutral Detergent Fibre (NDF) and Water Soluble Carbohydrates (WSC):

Table 1. Hay yields (t/ha), Neutral Detergent Fibre (NDF) and Water Soluble Carbohydrate (WSC) contents of hay at Hart in 2020. Values shaded blue in the same column are not statistically different.

Variety	Hay yield (t/ha)	NDF %	WSC %
Vasse	2.3 ^a	53.8 ^g	15.3 ^a
Williams	2.9 ^b	50.2 ^{ef}	21.2 ^b
Koorabup	2.9 ^b	50.1 ^{def}	23.5 ^c
Mulgara	3.0 ^{bc}	49.3 ^{cde}	23.9 ^c
Durack	3.1 ^{bcd}	50.9 ^f	21.4 ^b
Wintaroo	3.2 ^{bcd}	48.9 ^{cd}	24.1 ^c
Yallara	3.2 ^{bcd}	47.4 ^a	25.9 ^d
Carrolup	3.4 ^{cd}	47.6 ^{ab}	25.9 ^d
Brusher	3.5 ^d	48.7 ^{bc}	25.9 ^d
LSD (p≤0.05)	0.39	1.24	1.09
Sowing date			
May 5	3.5 ^b	49.8	24.3 ^b
May 25	2.7 ^a	49.5	21.7 ^a
LSD (p≤0.05)	0.44	n.s.	2.03

NDF:

Neutral detergent fibre (NDF) ranged from 47.4% in Yallara to 53.8% in Vasse. Export hay requires a NDF content of <57%. Lower values are desirable because higher NDF can lead to animals consuming less dry matter. The sowing date did not affect NDF%.

WSC:

The content varied and ranged from 15.3 to 25.9%. Brusher, Carrolup and Yallara had the highest contents and Vasse had the lowest. The minimum WSC content for export hay is 18%, which Vasse did not meet. Because WSC affects palatability, with higher values making the feed more desirable to animals, varieties such as Brusher, Carrolup and Yallara were the best performing for this parameter.

We also looked at grain yields across the trial, you'll be able to read that data and more in the full trial report.



Project: National Hay Agronomy Project
Funded by: AgriFutures Australia



My year at Hart; a 2020 review

2020 was...unique, to say in the least. For a lot of people, it was full of mostly downs. Fortunately for me, there were also a lot of ups. Summarising a whole year in one small document would be nearly impossible, so I've put together a short review of my more enjoyable parts of 2020.

1. Soil testing

Why did I choose this?

Twelve months ago even I would have been asking myself that.

Long, hot days spent doing the same thing over and again: drive, stop, revive the overheating rig engine, take a core, the soil gets stuck in the corer, bash said corer until you get the soil out, bag said soil, rinse and repeat. It can be monotonous. But for me, being a non-local, it was a fantastic way to see the Mid-North and of course, also being a lover of all-things-dirt, to see plenty of interesting soil cores.



Bek and I soil coring at the beginning of the year.



The result of our efforts.

2. Seeding at the Hart Field-Site

Perhaps less exciting for some, but for me seeding was great.

I was learning everyday about trial planning, making new contacts with people all across the industry and, of course, got to jump on some machinery.

As a plus, we got through it with minimal breakdowns.

It truly was fun over the next few weeks watching the ground turn from bare brown, to a nice field of green.



One of the trial seeders in action at Hart.

3. Assessments, assessments, assessments...

Counting plants after a frosty morning, spreading urea by hand and the wind picks up, and the infamous oaten hay biomass cuts... what's not to love?

During the year I enjoyed spending much of my time outdoors collecting data and applying treatments. There's a lot of ways to learn, but you can't beat hands-on experience.



Plant count assessments.



Biomass cutting.



Where there's a will, there's a way... the canola was too small to be sieved from our intercropping linseed / canola mixtures, so we used a fly screen as a sieve. It worked!



The final plot of oats to be cut at Hart.

Trial assessments took me from the field site at Hart, across the Mid-North from Marola to Nurom, to the SARDI lab where we analysed grain quality post-harvest.



From seed



to...seed!

4. Hart extension events

One of my favourite parts of this job has been the opportunity to be involved in extension of industry research to growers.

It's the reason Hart does what it does and it was great to hear some fantastic speeches from other researchers, industry professionals and growers.

Our Getting the Crop In seminar, Winter Walk and mini Field Day events were definitely highlights for me in 2020.



Our 2020 Getting The Crop In seminar.



A presentation on barley varieties at our Managing Varieties mini field-day event.

5. Industry engagement

One of the reasons I was interested in working with Hart was the level of grower involvement within the group.

By far some of my best experiences in 2020 were the ones where I got to spend time with and learn from some of the best in the district.

From cruising around the Mid-North looking at various crops with Simon Honner, a local agronomist, touring the Balco hay processing shed, presenting on trials to growers on group tours, to jumping on a hay baler with farmer Justin Wundke, and hitching a ride with Matt Dare, local grower, on his harvester, these were all great experiences for me to listen and learn.



Myself and Matt Dare after I hitched a ride with him during harvest.



Watching the hay baler in action with Justin Wundke.



Presenting on the NHA trial to a group of growers touring the Hart site.

So..., this brief review of 2020 concludes my final update.

As always, keep an eye out for trial results, upcoming events and other great resources on our website:
www.hartfieldsitegroup.org.au.

Cheers and farewell,

Brianna Guidera

Regional Intern 2020

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The Hart Research & Extension team, 2020; Sandy, Bek, me and Sarah.



www.hartfieldsite.org.au

