

WGIN Management Meeting + Field Trip
28th June 2012 @ JIC

Minutes

Attendees:-

Peter Shewry, Kim Hammond-Kosack, Malcolm Hawkesford, Simon Griffiths, John Foulkes, Peter Jack, Simon Berry, Luzie Wingen, Jayne Brookman, Claire Freeman, Simon Penson, Dhan Bhandari, Cathy Mumford, Daniella Tomescu, Sue Freeman, Thomas Joliffe, Simon Orford

Apologies

Matt Kerton, Farhana Amin, Richard Jennaway, Julie Seekings, Neil Paveley, David Feuerhelm, Chris Tapsell, Peter Werner, Andy Greenland, Mike Grimmer, Robbie Waugh

Welcome – Peter Shewry

Actions from the last meeting

See presentation

Action 11.11.11 - MTA – General MTA Ongoing. Information can be provided on a one to one basis to a specific breeder whereby an individual MTA can be issued.

Website Updates – Is there a way to flag up when new information is available on the website. Agreed to put a note on Monogram when there are updates on WGIN website.

Action 01/28.06.12 - ST

Action 08/21.02.12 - Rothamsted have provided Defra with collated comments on WGIN 2 and some companies have also sent individual responses.

Action 11/21.02.12 – There is not enough material to determine the functional properties of the NIL lines differing in quality QTL from the Hereward x Malacca population and we need to multiply them in the field for another year. Cathy M to provide summary as to where we are for minutes (see annex A).

WGIN Communications – summary in presentation, additional suggestions below.

Jason Pool – Journalists for Crops Magazine could run article for next year DB to send details to ST.

Action 02/28.06.12 – DB

Suggested to contact NFU, Royal Agriculture Society of England, Monogram

Bioscience KTN could post anything on their website linking to ours, contact Jayne Brookman

Website – Break down website usage data provided by google analytics as to who in the UK uses the website for the future.

Action 03/28.06.12 - ST

RESEARCH UPDATES

Objective 2, 3 and 4 – Tools and Resources (Simon Griffiths)

Presentation

Comments

The developments of NILs to validate effects has been initiated. Another round of backcrossing is required to produce pairs of NILs

Q: Are you going to have Cadenza NILs with RHT in

A: No

Worth looking for out of material?

Gediflux – Data available and can be put on website

Action 04/28.06.12 - SG

Q: Is there any reason why we went for NIL rather than DH lines

A: Cheap and easy, no scientific reason

WGIN – Map produced of Chinese Spring x Paragon and would like to put this on the website. We need to check with CiRC if this is possible.

Action 05/28.06.12 - SG

Objective 8 – NUE (Malcolm Hawkesford)

Presentation

Brief update provided including aerial shot.

Q: Are all trails grown under fungicide regime

A: Yes

Q: As your N Rate is so low when did you apply.

A: April?

Objective 9 – Drought Tolerance (John Foukes)

Presentation

New data since last Management Meeting in February was presented on Flag Leaf $\Delta^{13}C$ analysis and $\Delta^{18}O$ analysis for the panel of 18 cultivars.

Significant negative relationship was found between $\Delta^{13}\text{C}$ and $\Delta^{18}\text{O}$. However some cultivars showed positive departures from the overall relationship, combining low $\Delta^{13}\text{C}$ (high WUE) with low $\Delta^{18}\text{O}$ (high transpiration).

Relationship between WUE and transpiration looking for High Transpiration with Low WUE

QTL Detection

Need to arrange for processing of phenotyping data for QTL analysis as template is complete for year 2010/11

Do we repeat analysis of the Savannah x Rialto DH population next year because of the absence of drought conditions in 2011/12? Discussion to take place in terms of submitting grain samples from unirrigated treatment for $\Delta^{13}\text{C}$ chemical analysis of samples.

Q: Have you determined NUE for the Savannah x Rialto DH population

A: UoN have NUE data for 2007/8 and 2008/09 in Sutton Bonington experiments.

Q: Should we tell the INRA consortium that if NUE data are not published by a specific date we will carry out a separate study??

A: SG and LW to complete QTL analysis of NUE data on Rialto x Savannah DH population in INRA Consortium.

Q: Low WUE lines are giving higher yields than High WUE lines. Vision of High WUE giving high yield is a long way off?

A: We are focusing on traits to minimise the trade-off between water use and WUE looking at teasing this out.

Agenda item for November – 15/20 mins Project Summary + 1 hour Discussion on target outcomes and interactions.

Objective 10 – Take-All Disease (Kim Hammond-Kosack)

Presentation – focus on low take-all inoculum build-up

Data for all varieties

All the varieties performed equally well after the 1st wheat Cadenza and equally poorly after the 1st wheat Hereward. There were no interactions observed between cultivar choice in year 1 and cultivar choice in year 2.

Q: Is the fungus *Phialophora graminicola* uniquely associated with take-all or can it affect the build-up on other soil borne fungal pathogens

A: The dynamics of this fungus are not known. Suspect that other fungi in the soil could be affected by the presence of *Phialophora*. The affected of *Phialophora* is probably not unique to the take-all fungus.

Vanessa MacMillan a BBSRC-HGCA funded PhD student in her 4th year has now been offered the vacant position at Rothamsted and will take over the role left by Richard Gutteridge after she has finished and submitted her PhD thesis .

GENERAL UPDATES

Update on 2nd Round of Crop Improvement Research Club (CICR) Jayne Brookman

Presentation

BBSRC industry research clubs are part of global challenge in food security and climate change.

The vision is that funded projects are not left to develop in isolation. Instead they are strongly co-ordinated by the club, building bridges and strengthening bonds and co-ordination of outputs.

Members – as shown on presentation

First Call there were 6 projects with not many on wheat. Second Call there was 9 projects with 5 of these relevant to the wheat community. Full List is available on BBSRC website but there was a good balance across the topics.

Jayne provided an update on news and events since last November, when Jayne updated the stakeholders at the annual WGIN Stakeholder Meeting.

Jayne commented it had been a slow start but we are now starting to get presentations from the 1st round.

Comments:

Industry Advisory Panels good way of engaging industry.

Q: What is the best way to approach a breeder to go on an advisory board?

A: Simplest way to approach to CIRC is through the co-ordinators.

A discussion took place about the possibility of a CIRC, following the announcement that DRINC2 will be funded. CIRC1 finishes in 3 years and perhaps need to think about it in a years' time. Should include Dissemination events on key deliverables, highlight added value by combining datasets, existing datasets being joined with new datasets.

Disappointing there was no representation from UK supermarkets on CIRC1.

Avalon x Cadenza Workshop

It has now been two years since the last Avalon x Cadenza workshop that was held at JIC (see WGIN website for previous agenda – 9th November 2009) . It was agreed

that it would be a good time to hold another workshop in late January / early February at Rothamsted.

Need to compile a list of projects using AxC resource, could publicise on Website to potential users of AxC

Once the date has been set Simon to liaise with Suzanne to book room at Rothamsted for 60+ people.

Action 06/28.06.12 - SG

Feedback on Cereals 2012

This year BBSRC shared the Rothamsted Stand with Richard Gutteridge presenting posters and demonstration plots for the WGIN take-all projects. Feedback was that it were well presented with good visual impact.

For the future, JIC will probably do less at Cereals due to funding and will do more in-house. RRes will continue to attend. It was suggested that root research would be an interesting subject for the future.

Feedback on Broadbalk Discussions

Broadbalk is the longest running agricultural experiment of 169 years. About 2 years ago Rothamsted sought advice from some of the breeders about changing the variety as this is usually done about every 10 years but we have been growing Hereward for the last 17 years. It was decided that this year is the time to change to a modern high yielding breadmaking wheat which is likely to be grown for some years. There were two front runners Gallant and Crusoe and after a lot of discussion it was decided on Crusoe. Many thanks for all the comments received. Crusoe seemed a popular choice with people at Cereals and has good yields, high protein, high disease resistance and slightly later maturity.

WGIN Stakeholder Meeting – 27th November 2012

Defra have been pleased with the success and increasing attendance of the WGIN Stakeholder Meeting with differing people attending each year. It was agreed at the last meeting that although it resulted in a long day the afternoon panel session was well supported and a highlight of the day.

Potential topics were circulated via email for this year's panel discussion. However following a poll, there was no specific favourite. It was therefore agreed that a new suggestion entitled "Changing Disease Patterns" would be a good choice that could incorporate, changes in yellow/brown rust, septoria etc. and pesticide resistance and emerging diseases.

Many thanks to those who took part in the poll and those who made suggestions.

WGIN Newsletter

The next WGIN Newsletter will be focused on WGIN Resources. We are aiming for this to be out in July and would therefore be grateful if those that have been emailed could please put something together plus appropriate pictures as this Newsletter will be used in all our external communications and is for Defra to use.

BBSRC's future strategy and priorities for wheat research

Unfortunately a representative from BBSRC was unable to join the meeting. However the following bullet points were received ahead of the meeting in relation to a consultation email that was sent around last week.

From the website:

- The BBSRC's Food Security Strategy Advisory Panel has established a broadly-based, time-limited group to advise on **BBSRC's future strategy and priorities for wheat research**. For full details about the subgroup, including a list of questions it has been asked to consider, please follow this link to the BBSRC website and see the linked pdf document:
- [wheat questions.pdf](#)
- The group would welcome views on any or all of the questions it has been asked to consider. Contributions had to be sent to wheat@bbsrc.ac.uk by 29 June 2012.

Adam Staines (BBSRC) Comments:

- I will consider responses past this data from WGIN members
- There were no sinister aims of the group, given our wheat spend was predicted to get close to 20% of all our food security spend we just wanted to have a sense check of whether our wheat investments were future proof
- We also wanted to understand our role in the international wheat space.
- My current intent is to pull together the groups thinking and the comments received to the consultation and produce a forward look or the like. It was always the intent to circulate this forward look for comment from the community , which is why we were not as proactive in consulting at the initial stage.
- Current aim is to circulate something over the summer with the aim of tidying this up and having a final document in the autumn.
- We have only had one meeting so far so some of this thinking might evolve.

Happy for people to email direct if they have questions or concerns

Adam

Breeders confirmed that this had been circulated within their community, being notified through Monogram and via Cristobal Uauy at JIC. Limagrain, BSPB, RAGT and KWS are treating it seriously with each responding as individual companies.

Jayne Brookman commented that BBSRC have to make sure they are capturing the value of the money they are spending on wheat. It also forms part of larger discussion across Research Councils on the strategy for Food Security Although Jayne doesn't represent BBSRC she will aim to provide any feedback she can.

Important to remind BBSRC that WGIN is an important network and Defra supported

Field Visit

[Pictures](#)

Simon gave a brief introduction to the JIC Field Visit

Visit will show: NILs, Lola Material Paragon x Watkins populations, Paragon mutants, Material multiply for Europa Adapta Wheat and an option to see PPI 100 Plots.

Milestones

RRes / UoN/ JIC will compile within a week then send to KWS/Limagrain for input.

Date of Next Meeting

6th November 2012 at UoN

