

Draft Minutes
Oilseed Rape Genetic Improvement Network Management Meeting & INQoRO
Tuesday 3rd May 2023

Zoom meeting

Attending:

Ian Bancroft, UoY (**IB**)

Fred Beaudoin, RRes (**FB**)

Andrea Harper, UoY (**AH**)

Helen Riordan, DEFRA (**HR**)

Bruce Fit, UoH (**BF**)

Graham Teakle, UoW (**GT**)

Lenka Havlickova UoY (**LH**), Zhesi He (**ZH**)

Tom Wood, NIAB (**TW**)

Dhan Bhandari, AHDB (**DB**)

Yongju Huang UoH (**YH**)

John Hammond (**JH**)

Jon West, RRes (**JW**)

Nick Byrd (**NB**)

Pete Berry (**PB**), Kate Storer, ADAS (**KS**)

9:00 Meeting starts

Minutes and action points from previous meeting (Ian Bancroft)

OREGIN

AP42 - we need to update publications

AP56 - outstanding

AP57 - in progress

AP58 - RW needs to share the transcriptomic data so Zhesi can do the comparison

IB - any changes to be made in minutes from OREGIN or INqORO?

INqORO

AP4 - FB to chase Unilever for meeting and traits they are interested

AP5 FB can get quotations, for scaling to a ton scale with appropriate people (more relevant for feature project)

Project management and administrative matters (Ian Bancroft, Helen Riordan)

IB - have not heard on the DEFRA side. Everything is running smoothly.

Project management and administrative matters (Ian Bancroft, Helen Riordan)

IB - introducing AH, she will be helping with project and developing grant proposal for the next stage

IB - admin people informed that all contract sorted

HR - hoping to provide update after the RAG meeting

IB - is it still in the stage when DEFRA is allocating the budgets to the GINs?

HR - in stage of final approvals for that

GIN Activity 1 – Stakeholder network

Priority area 1: Community meetings
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2023 UK-BRC meeting. Milestone M94 (Lenka Havlickova, Ian Bancroft)

IB - asking about any update on UK-BRC meeting

FB - in process with Smitha and GT (new system of catering etc.). It will be combined with other meetings including breeders. GT still administrating the mailing list, but FB and SK have access to it.

2023 OREGIN Stakeholder Forum. Milestone M105 (Coretta Kloeppe, Ian Bancroft)

IB - how is MN? TW - all okay, doing scoring etc. Hope FB will get in touch with him and Correta.

DB - would it be hybrid meeting?

GT - in principle it's possible to organise it - will check the practicalities

GIN Activity 2 – Genetic tools and resources to address challenges

Priority area 1: Physical resources to underpin rapeseed breeding

Maintain and distribute pathogen collections. Milestone M112 (Bruce Fitt/Yongju Huang)

YH - new isolates from international collection (*L. maculans*, *L. biglobosa*), currently preparing for long term storage. Screening for mycoviruses.

Maintain and distribute *B. napus* DFFS lines. Milestone M113 (Graham Teakle)

GT - bulking up some plants, not much to report

Priority area 1: Field trials

Establish, manage and phenotype field trials. Milestone M99 (Tom Wood, Mark Nightingale, John Hammond, Kate Storer)

IB - it didn't go well in Reading this year

JH - strong CSFB invasion, trial terminated just before the christmas

Interpret field trial data. Milestone M102 (Tom Wood, Mark Nightingale, John Hammond, Kate Storer, Yongju Huang)

TW - also similar to JH, didn't manage to take scoring and some scoring was done thanks to help of MN

YH - severe diseases observed in the field (sharing presentation). 33 lines assessed April 13th (very bad infection of light leaf spot symptoms and severe phoma stem canker symptoms). Leaf scorch damage also observed.

JW - Lincolnshire site had some severe below temperatures (-15C) which could be the reason for such severe diseases.

KS - sharing slides, ADAS trial drilled 30.8.2022, it was a bad year for CSFB. Anyone is welcome for scoring, just ask KS. Vast majority of plots look nice, odd thing with one of the novel line, struggling with herbicide and fungicides. IB - maybe some big deletion causing susceptibility. KS- sharing data from a root length density experiment, done by Lauren. After applying AT some candidate genes have been observed.

GT - where was the gene expression data from? IB - leaf tissue, OREGIN or RIPR.

Associative Transcriptomics of trial data. M109 (Lenka Havlickova)

IB - AT will be done after the results from field trials will be obtained.

Priority area 2: Nutritional project

Produce nutritionally-enhanced seed for crushing. Milestone M96 (Kate Storer)

KS - field looks similar like for OREGIN. 3 lines drilled very carefully hopefully producing enough seeds for the project.

Crush and refine oil from nutritionally-enhanced seeds. Milestone M103 (Raymond Sloane)

IB - Raymond will let us know hopefully at the next meeting, after the seeds will be available.

Assess properties of nutritionally-enhanced oil. Milestone M116 (Nick Byrd)

NB - a while ago oil has been tested for various characteristics including FAMES, sterols, waxes and to check that it's food safe. Then the frying test could be performed.

Engage with potential supply chain and develop draft business plan for commercialization of enhanced oils. Milestones M100, M115 (Natalia Stawniak)

Priority area 3: Heterosis assessment

Assess transcriptional impacts of heterosis in an expanded panel of F₁ hybrids. Milestones M93, M101, M114 (Ian Bancroft)

IB - sharing presentation, data from four different hybrid combinations where heterosis for biomass of first leaf 26 days after seedling emergence has been observed in two lines. Transcriptoms of the hybrids clustered with transcriptoms of the male parents. Priority area 3: transcriptional impacts of heterosis -> 43 hybrid combinations made with Adriana CMS WOS as training set.

GT - is it mostly a cross between WOSR and SpOSR? IB - yes we are testing combinations which breeders wouldn't test.

TW - have you looked at any pathogen related genes? IB - not, but the data is there and anybody who is interested to study it is welcome.

AP for everyone, please send the presentation to IB (he will use them for DEFRA report)

GIN Activity 3 – Develop and exploit opportunities for further research

Spin-off projects (all)

IB - writing strategic LoLa BBSRC project on heterosis - will let people know in next meeting

GIN Activity 4 – Dissemination and knowledge exchange

Priority area 1: Information resources to underpin rapeseed breeding

Provision of molecular data. Milestone M110 (Bruce Fitt/Yongju Huang)

YH - all information about OREGIN are on the website

Provision of trait data. Milestone M111 (Bruce Fitt/Yongju Huang)

YH - website is in use by breeders

BF - we are still missing information about publication and contact details. AP everyone please contact Jamie and update it with his help.

AOB

PB - anyone is going to Australia for the International Rapeseed Congress? YH - yes, we will try to publicise our OREGIN project

Date for the December Management Committee meeting (Milestones M106, 107)

LH to send Doodle for Dec meeting (ideally before the RAG meeting)