

## UK Plant Genetic Resources Group

### Minutes of meeting on 14 October 2015 Room 624, Nobel House, 17 Smith Square, London

Nigel Maxted, University of Birmingham (Chair; NM)  
Frances Gawthrop, A.L. Tozer Ltd (FG)  
Sophie Legiul, Plant Heritage (SL)  
Ruth Eastwood, Kew (RE)  
Lydia Smith, NIAB (LS)  
Matthew Ordidge, University of Reading (MO)  
Sean May, University of Nottingham (SM)  
Milika Buurman, Limagrains UK Ltd (MB)  
Charlotte Allender, University of Warwick (CA)

Adrian Turner, JIC (AT)  
Mike Ambrose, JIC (MA)  
Julian Hosking, Natural England (JH)  
Tom Christie, SASA (TC)  
Ianto Thomas, Aberystwyth University (IT)  
James Armitage, RHS (JA)  
Julian Jackson, DEFRA (JJ)  
Sarah Cunningham, DEFRA (SC)

#### 15/16 Apologies (NM)

Penny Maplestone, BSPB  
Neil Munro, Garden Organic  
Gerard Hoppe, AFBINI

Feli Fernandez, EMR  
John Dickie, Kew  
Glenn Bryan, JHI

#### 15/17 Minutes of the meeting held on 25 March 2015 (NM)

Minor corrections were suggested and then the minutes were agreed.

#### 15/18 Matters arising (NM)

MA updated the group on 15/07:

- JIC have been successful in getting APHA to extend the validity period for plant health certificate to the full life of the seed. This only applies to JIC material, although other collections may be able to put a similar case forward
- Concessionary charges are still under review
- APHA have concluded that it is not feasible to share operational knowledge base

All other matters arising were dealt with later during the meeting.

#### 15/19 UK Landrace Conservation and Use Concept Note (JH/JJ)

JJ & JH contacted Jim Dixon (HLF Trustee) about the project and he indicated that an application should be submitted so that the proposal can be considered. JJ reinitiated contact with Michael Whitehead (Prince's Trust) who offered support for the project generally, although the PT can offer little financial support.

#### **ACTION JJ: Contact Michael Whitehead for an update on Prince's Trust funding**

#### Top fruit genetic diversity meeting (spring 2016)

The main intention of this meeting is to bring together experts working in the orchard area. There is significant interest in orchards from a biodiversity perspective, and it would be valuable for these experts to also consider orchards from a genetic diversity perspective. A planning meeting for this event took place at the end of September. It was suggested that we should aim to get a high profile person (such as HRH) to attend this meeting, and that we should explore the possibility of it taking place at Highgrove (where 1000 apple trees from the NFC have been planted). JH is preparing 250 words on the vision for this meeting.

#### **ACTION JH: Contact farm manager at Highgrove**

#### **ACTION ALL: Send any meeting title suggestions for the top fruit meeting to JH**

At the last meeting it was actioned (15/03) that a document would be produced summarising the total state of *in situ* and *ex situ* conservation in the UK. This has not been completed yet, but work is starting with top fruit.

MO noted that parallel work should be undertaken on bush fruit and veg as there is sufficient activity in these areas that needs to be dealt with separately.

LS: Innovative Farmers initiative was launched earlier this week (part of Duchy Future Farming Partnership). Through this scheme more than £800,000 will be offered to farmer groups to allow them to investigate techniques that will make a difference on the ground (<http://www.soilassociation.org/news/newsstory/articleid/8448/progressive-farming-partnership-launches-new-network-of-innovative-farmers>).

### **15/20 Implementation of the Nagoya Protocol (JJ)**

The UK SI entered in to effect on Monday.

The UK was concerned as to how one of the Nagoya checkpoints would work and so we voted against the EU implementing acts. The implementing acts will still apply as only a small number of MS opposed the proposals, but they will be reviewed at a later stage.

EU guidance is work in progress. The current draft includes examples but these need to be made more generic. A lot of users (all sectors) are keen to see further clear steps on due diligence and the guidance starts to address this. The guidance will be published towards the end of this year.

MA questioned the use of sequence data, and JJ clarified that Nagoya addresses access to physical genetic resources (although MAT may include restrictions on sequencing).

The UKPGR group considered the value of a specific meeting focusing on Nagoya implementation in the UK, and SM suggested that a video may be useful as there are too many people interested in Nagoya for a meeting.

Numerous Nagoya awareness raising opportunities are coming up (e.g Rothamsted on Tues 20<sup>th</sup> Oct, BSPB events, and Plant Network events). JJ also indicated that there may be UK guidance in addition to the EU guidance. SL informed the group that the Horticulture Network have put in place a working group to raise awareness and they have already had two meetings. This group is managed by RHS and they will produce guidance once the UK guidance is available. They are currently working on a decision tree.

Article 10 (global and multilateral benefit sharing mechanisms) is going to be discussed next year.

There is going to be a technical meeting on the clearing house mechanism next month.

**ACTION ALL: please feed any comments to JJ on the clearing house mechanism in the next 2 weeks**

### **15/21 Updating the UK National Inventory and EURISCO (IT)**

Since the last meeting the National Inventory was updated to October 2014, and the October 2015 update is now underway. EURISCO is updated first and then the inventory will be updated.

With regard to adding an availability field to EURISCO (action 15/06), it is possible but it needs to be discussed at the working group meeting.

RE added that the MSB are submitting data directly to Genesys

MA indicated that we are now in a good position to discuss a revised plant indicator with James Williams with JNCC

NM thanked IT on behalf of the group.

### **15/22 AEGIS discussion (documents circulated by JJ on 29/09/15; JJ)**

Comments on the AEGIS documents have been received from MO & Bert Visser and these comments are broadly aligned. CA has similar views and is concerned that some of the objectives are not realistic. CA is also concerned about the AQUAS (AEGIS quality system) which puts a lot of responsibility on the WG Chairs.

Mid-term steering review of ECPGR is coming up in January and this may provide an opportunity to take stock of AEGIS, and additional documents may be produced in advance of the meeting.

RE shared that Kew have developed simple gene bank standards based on a review of existing guidance such as FAO.

**ACTION RE: share Kew guidance with all**

MO & CA raised concerns about absolute numbers within the AEGIS guidance (e.g. 85% viability threshold) and MA suggested it would be helpful if the document was broader to facilitate more people meeting the obligations.

MO initiated a discussion on the UK position on AEGIS. JJ indicated that we may need to look at it in more detail, and a more in-depth discussion nearer the time of the AEGIS meeting would be appropriate.

MO: One of the key claimed benefits of AEGIS is rationalisation at a European level, and this could apply to NFC, but possibly not all collections across the UK. CA indicated that AEGIS could help with prioritisation of regeneration activities within gene banks.

RE highlighted that if regeneration is happening in different countries under different climates then gene banks may be conserving different elements of within species genetic diversity, and this could be an argument for keeping duplicates. LS highlighted her current work on sainfoin and the difficulties associated with acquiring accessions for this work. LS obtained accessions from a range of gene banks and when the seeds were grown side by side the plants were shown to vary considerably in appearance. SM added that mixed populations offer benefits and in the past different ecotypes have turned up upon sequencing

### **15/23 Future of the Genetic Resources Portal (NM)**

JH highlighted that most of the links do not work and that the FAnGR references are 8 years old, and the plant data has not been updated since 2009.

SM indicated that the dataset could be stored as a static dataset elsewhere. The group agreed that there is no longer any value in maintaining this portal.

**ACTION DEFRA: take GRFA portal down after 31<sup>th</sup> October 2015. Consider providing a redirection page to UKPGR (if this can be done at no cost)**

### **15/24 ECPGR Update (JJ)**

The second call for projects under the ECPGR activity grant scheme closed in August 2015. Ten proposals were received from 10 working groups. These projects are being considered by the ExCo and a decision will be made at the end of October 2015.

The mid term committee meeting is taking place and Bosnia and Herzegovina next year.

CA shared that the composition of the working groups has changed and these WG now focus more on broad scale characterisation and less on conservation. CA would be interested in comments from the Ex-Co on this change.

NM stated that the on farm concept was re-submitted for the second time and it has already been rejected by ECPGR. The size of the WG makes it difficult to work on proposals as members of the group often have disparate views.

### **15/25 Feedback on Plant Treaty Governing Body meeting (JJ)**

The 6<sup>th</sup> meeting of the Governing Body was held in Rome last week and was attended by JJ, SC, Donna Mackay (Defra legal adviser), and NM & MA also contributed to side events during the meeting. One of the main issues discussed was enhancing the function of the multilateral system of access and benefit sharing to try and increase user based payments.

Just before the meeting the secretariat provided a document detailing changes to the sMTA that could be considered in order to increase user based income, but this document contained too many complex issues to be addressed at this GB. Instead, terms of reference for subsequent meetings of the working group were agreed. Future meetings will focus on developing a subscription system by adjusting Article 6.11, with the intention of agreeing some of the changes at GB7 (in 2017).

With respect to the funding strategy the UK was keen to point out that many contribute towards the Plant Treaty (e.g. UK Darwin Initiative, contributions from the planting breeding sector) and that money going in to the BSF should not be the only focus. The UKPGR group emphasized the importance of breeders advertising associated benefits of their work.

MA thanked Defra for attending the Plant Treaty meetings

**ACTION DEFRA: circulate UK meeting report to UKPGR group**

**15/26 PGR applications/project news (NM)**

AT: Horizon2020 application referred to in 15/11 of the minutes from the March meeting "The wheat project for healthy food today and tomorrow" was not successful.

JIC are currently looking for ways to verify stocks which require cytogenetic analysis using SNP marker technologies (cheaper and less subjective). Started collaboration with a group at Kansas State University to see if "GBS" (Genotyping By Sequencing) might help.

AT will be attending the presentation by Mike Worrell from the NMRO re compliance with Nagoya for UK researchers at Rothamsted on Tuesday 20/10/15.

JH: top fruit work was discussed earlier in the agenda.

NE has allocated resources towards CWR work on the Lizard. JH is putting a CWR paper together for the NE board to consider in spring next year. NE are looking to do wider CWR surveys on the Lizard with the help of Kew.

RE: the Kew restructure is complete and the science strategy was launched a few months ago.

CWR work in the UK is being led by Clare Trivedi, and the national tree seed programme is in the second year of collecting. Kew has a UK seed hub that is looking at regenerating native UK seed. Kew has agreements to collect CWR seeds from 12 countries and another 12 are under development. They currently have 303 accessions (and this is 1% of the target). Kew involvement in this project will end in 2018.

23<sup>rd</sup> Nov – joint GCDT & Kew event at the MSB "The Role of Crop Diversity in Transitioning to a Resilient Food System in a Changing Climate".

JA: a big flora project (building on RHS Plant Finder) will start next year to provide one resource for info on all garden plants in the UK. RHS will work with specialist societies, big gardens, and the project includes citizen science. A paper on the project will go to the RHS science committee for approval next week. RHS fundraisers are working on an HLF application for £250,000.

CA: H2020 application led by a Swedish researcher has been submitted to fund a project aimed at improving the utilisation of brassica resources (REMBRANDT).

ECPGR grant for proposal submitted by umbellifer working group is pending.

CA won internal university funding to look at the wider impact of the vegetable gene bank. Someone will be employed on a short term basis for this work but it is unlikely that they will be able to calculate financial benefits during such a short time frame.

Warwick University has agreed to invest <£6,000 in improving the energy efficiency of growth chambers.

SL: Plant Heritage is undertaking a review of national collections to try and reach a common standard. These collections are privately held and so the records are variable.

There have been lots of staff changes at PH, and they are currently undertaking a strategic review. PH are applying for HLF transition funding to enable them to apply for large scale funding.

IT: IBERS has obtained funding to become an innovation centre, and a new seed store will be developed as part of this.

FG: BSPB are also part of the Rembrandt consortium, and another H2020 funding application. They have recently been collecting CWR seed in the UK, and noted that there is a lot of variation within species and any rationalisation of genetic resource collections needs to be considered carefully.

MO: is work package leader for a H2020 bid (apple and pear project) that is in the current assessment phase.

SM: has submitted a funding application to the National Science Foundation for a project aimed at aligning US informatics with UK standards.

MA: ECPGR grant for barley proposal is pending. JIC have established a formal collaboration with the Australian cereal gene bank to try and facilitate access to their material.

SeedStor facilitates cost recovery and this has started with the wheat tilling population

JIC will be sending out a tender for RFID passive tagging of stock, and they are hoping for 4 responses. The JIC want to use the additional functionality that non visual bar coding offers.

LS: NIAB restructure almost complete. There are a number of projects to extend the remit of pre-breeding group. They are using CWR in wheat projects and extending work with CIMMYT (to facilitate access to goat grass).

Funding has been secured to keep NIAB's demonstration facility.

Extended interaction with ICARDA and CIMMYT with regard to the demo site, and this should facilitate access to material coming out of these organisations.

A number of funding bids and cross-border proposals have been submitted.

TC: re-contacting members of Scottish land race protect scheme to see if they are still utilising landraces. The initial results have been encouraging indicating that younger generations are continuing to use the landraces. SASA are involved in a PVR project on harmonizing DUS testing .

MB: PCGIN started back up again. MB is getting more involved with DUS testing for field beans (and identifying traits that can be used in this process).

NM: has been involved with 2 H2020 bids: PGR gold and an unsuccessful bid. SFS04-2017 – a consortium has been put together to apply for that funding, and the work will focus on setting up networks for in-situ conservation for CWR and landraces. NM has obtained funding from IUCN for red listing CWR and identifying global areas for CWR.

NM is involved in 2 ECPGR projects on beta and forages.

Ongoing consultancy work on agro biodiversity conservation strategy for Oman & work for FAO.

Nigel is organising a meeting in Barcelona in December on CWR conservation and use, and this is part of a series of preparatory actions.

Chris Barker (Defra H2020 lead) updated the group on H2020. Key details:

- Across all H2020 funding streams, 9,000,000,000 euros have been allocated to UK researchers to date, and this is more than any other country.
- 16/17 work programme was published today and this includes indicative topics areas for 2017 ([Participant Portal](#)).
- Next summer the Commission will start considering the 2018/19/20 work programme and request MS to provide advice on topic areas. The UK sits on the programme committee for this, and so the UKPGR group can feed in to the planning via Defra.

**ACTION DEFRA: Add “Discuss potential topics for H2020 2018/19/20 work programmes” to agenda for next UKPGR meeting**

### **15/27 Summer Technical Visit (NM)**

LS apologised for not organising a summer technical visit this year and agreed to organize a visit to NIAB in early July next year. The format for the day will be a conventional meeting followed by a tour of the plots.

### **15/28 AOB (NM)**

JJ updated the group on Defra's 25 year farming and environment plans. A number of farming stakeholder events have taken place over the past few months, and some of these have been attended by representatives of the UKPGR group.

The first meeting for the environment plan took place at Nobel House today.

**ACTION DEFRA: make sure that UKPGRG are aware of future environment plan meetings (once dates are known) so that genetic resources can be represented at these events.**

JH requested suggestions of how genetic resources may be able to generate income for Natural England.

NM asked about the upcoming GCDT donor meeting in Washington and JJ clarified that it is very unlikely that the UK will be attending.

NM informed the group that a publisher had contacted him wanting to publish a crop version of the encyclopaedia of heritage breeds. There is little money involved in this work but it may be a good opportunity to promote genetic resources.

**ACTION NM: request species/crop profile format from the publishers and circulate this to the group**

**15/29 Date of next meeting (NM)**

Wednesday 9<sup>th</sup> March 2016

**15/30 Talk by Mike Worrell on the role of the NMRO as the Competent Authority for the Nagoya Protocol**

Talk was postponed