

Fungicide Resistance Action Group-UK

FRAG - UK



FRAG-UK 52nd Meeting

09.30 coffee, 10:00 meeting start on 16th March 2023

Sophi Taylor Building, NIAB, Park Farm, Villa Road, Histon, Cambridge, CB24 9NZ

Minutes

Present	
Chair	Fiona Burnett (SRUC)
Secretary	Mike Grimmer (ADAS)
Members	Neil Paveley (ADAS) Przemyslaw Kowalski (BASF) Andy Bailey (Adama) Jo O'Leary Quinn (HSE) Aoife O'Driscoll (NIAB) Jock Willmott (AICC) Kerry Maguire (Bayer CropScience) Richard Dyason (NuFarm) David Howard (AIC) Greg Kemmitt (FRAC) James Cheesman (Certis Belchim) Peter Noal (Bayer)
Guests	Nichola Hawkins (NIAB) Joe Bagshaw (Syngenta) Chris O'Reilly (HSE) Faye Ritchie (ADAS)
Apologies	Thomas Fleming (AFBI) Judith Turner (FERA) Jason Tatnell (Syngenta) John Clarkson (Warwick) Catherine Harries (AHDB) Steven Kildea (Teagasc)

Anti-Trust guidelines were circulated prior to the meeting

1. APOLOGIES FOR ABSENCE

John Clarkson, Craig Chisholm, Catherine Harries

2. INTRODUCTION OF NEW MEMBERS/VISITORS

Visitor: Nichola Hawkins, NIAB; Joe Bagshaw, Syngenta; Craig Chisholm, Corteva; Faye Ritchie, ADAS; Peter Noal, Bayer. Chris O'Reilly, CRD. New member: Jock Willmott, AICC.

FRAG-UK would like to record our thanks to Louise Cooke, for all her hard work, ability to work collaboratively and for her editorial skills with the resistance management guidelines.

3. NOTICE OF ANY OTHER BUSINESS

None

4. CONFIRMATION OF PREVIOUS MINUTES

To be confirmed once actions updated

5. ACTIONS FROM PREVIOUS MEETINGS

FB to circulate completed soft fruit guidelines - **DONE**

MG to update cereal guidelines – **DONE**

FB to prepare Qil guidelines – **DONE** (Qil included in cereal guidelines)

FB to revise potato guidelines, with mancozeb update - **DEFER**

FB to organise update of OSR guidelines, with Faye Ritchie - **DEFER**

AOD to update pulse guidelines by 17th Feb 2023 - **DEFER**

MG to approach BBRO regarding sugar beet guidelines – **DONE**

NH to share sensitivity testing slides, redacted for pydiflumetofen - **DONE**

SK to share slides presented - **DONE**

MG to set up FRAG-UK Teams Group – **DONE**

MG to confirm date and venue of next meeting - **DONE**

6. UPDATE FROM FRAC

GK already shared FRAC SC meeting minutes (Jan 202) by email. DMI and CAA minutes updates already; SDHI, Qol and AP to be updated. Can now go to "What's New" on the FRAC website, rather than scroll through working groups. Suspicious potato blight CAA isolates recorded in minutes; mutation confirmed, found in a number of countries including Denmark but not yet in UK or Ireland.

GK presented objectives for 2023. FRAC working on a database to capture all historic data, including resistance reports. FRAC considering whether database will be shared. JOQ highlighted that it's a requirement for companies to annually

report any resistance cases to regulators; good to discuss in RAGs before CRD update their case information.

CropLife International (CLI) considering the issue of triazole resistance in *Aspergillus fumigatus*; whether resistance might be coming from agricultural use e.g. dipped bulbs placed in compost heaps. The “One Health” concept considers ag use alongside medical use; may apply to DHODH inhibitors. CLI bringing stakeholders together to tackle the issue. JOQ stated that CRD were aware of EFSA work on this issue and will discuss an appropriate response with the Dept of Health. CLI are funding work on multi-drug resistance (MDR), starting with studies on Plasmopara, to include testing anti-resistance strategies.

FRAC have internal processes for reporting and liaising with national RAGs. New poster and leaflet issued; website has 5,000 visits per month. A FRAC app is available. Andreas Goetze new chair of FRAC, Dietrich Hermann stepping down.

Discussion on FRAG-UK core guidance documents and information on resistance issues; thought to be on legacy website but not on AHDB website. **ACTION FB** to discuss with CH.

7. FRAG-UK GUIDELINES/ADVICE

7.1 Soft Fruit Guidelines

- Updated soft fruit guidelines now on AHDB website

7.2 Update Cereal Guidelines

- To be updated by Monday **ACTION MG: DONE** (guideline on AHDB website)

7.3 Apple and Pear Guidelines

- Completed by Louise Cooke. **ACTION AB** to check: **DONE**

7.4 Others (OSR, pulses, potatoes, sugar beet, grass/turf)

- Potato guidelines need major revisions **ACTION FR**
- Faye Ritchie offered to help FB with OSR guidelines **ACTION FB + FR**
- Kerry to check pulses guideline once AOD has completed **ACTION AOD**
- BBRO to be followed up regarding sugar beet guideline **ACTION MG**
- Grass/turf guidelines to be parked for now

7.5 Strategic messages for 2023

- Revised guidelines for cereals including Qil messaging
- Update on potato blight including CAA isolates and mancozeb

8. UPDATE ON CURRENT RESEARCH

- NH presented slides on fungicide sensitivity testing for wheat septoria. Increasingly complex Cyp51 changes, in combination with overexpression. Variation in EC50 between sites and depending on treatments applied. Seeing more isolates on upper end of EC50 for SDHs and complex picture of cross resistance. Starting to see some double mutants. Least sensitive isolates have H152R. Isolates within baseline for Qils.

- FR presented an update on potato blight and CAAs, including research work on resistance management. Changes observed in virulence and insensitivity. Disease control manageable but might change going forward. New variant 43_A1 first found in Denmark in 2018. Suspicious isolates with higher EC50 reported in 2021 by FRAC. Work looking at strategies to prolong the effective life of fungicides for control of late blight. Position statement needed for FRAG on CAA use **ACTION FR + NP – DONE** (Syngenta have issued guidance)

- NP presented a CRD project on balanced mixtures. This modelling work looked at the range of doses for a mixture of two fungicide products that prolonged the effective life of the mixture. The project final report will be put in the public domain by CRD.

- MG presented an Adama project looking at the benefit of folpet to prolonging the effective life of single-site fungicides in a T1/T2 programme. The inclusion of folpet had a substantial effect on delaying development of resistance to single-site fungicides, with a greater beneficial effect under higher doses of folpet.

- FB updated on UKCPVS – AHDB are reviewing the purpose and funding of this programme and whether they can combine virulence with fungicide resistance testing.

9. RESISTANCE IN THE UK

- KM updated on Bayer sensitivity monitoring for cereals. Septoria: prothioconazole situation unchanged from 2020 to 2021; slight shift in 2022. Some isolates with higher EC50s to bixafen. Brown rust: no changes. Yellow rust: no changes, SDHIs sensitive. Wheat powdery mildew: high and stable sensitivity in 2022; one concerning isolated for spiroxamine in 2021 but back to baseline in 2022. Net blotch: one outlier in 2022 for prothioconazole from a trial site. High resistance factors for fluoxastrobin (F129L) but sensitive for trifloxystrobin. Broader range of EC50s for bixafen in 2022 than in 2019. Low EC50s for fluopyram.

- JB updated on Syngenta sensitivity monitoring for cereals. No shifts reported for DMIs but high proportion of Ramularia insensitive isolates in 2022. Qols: no change for yellow rust or brown rust. Slight shift in EC50 for net blotch. SDHIs: gradual shift in EC50 for Septoria, UK high compared with rest of Europe. Slight decrease in sensitivity for brown rust, but field efficacy maintained. Yellow rust and mildew sensitive. Net blotch EC50 creeping up across Europe. Gradual shift for ramularia; rhynchosporium sensitive.

10. UPDATE FROM COMPANIES

None

11. FRAG-UK WEBSITE UPDATE

CH updating website, migrating from legacy website.

12. LIASION WITH OTHER GROUPS

FB updated. Norbarag keen to share minutes to understand each other's position. **ACTION FB** – reach out to other countries RAGs at Reinhardtsbrunn.

13. Future events and publicity

- FRAG-UK can be mentioned at Open Days
- New guidelines coming out
- AOD will reach out to horticulture colleagues regarding horticultural guidelines

14. AOB

Discussion on why might be seeing more eyespot now, especially in spring barley. Thought that potentially due to various reasons: (i) 20% of wheat is Extase which has a resistance rating of 4, (ii) not much knowledge on efficacy of products, and (iii) changes in agronomy such as move to more min-till.

15. Date and Venue of next meeting

All agreed that we would have an in-person meeting every March and a Teams meeting in November. Next meeting via Teams, date to be confirmed **ACTION MG - DONE**