

# Regulatory Challenges from Fungicide Resistance

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## Introduction

- PSD's Remit
- Resistance considerations in the approval process
- Our role in Resistance management



## Why do we get involved?

- Pesticide Regulation is a cost benefit analysis
  - The Benefits of use must balance the Risks
- The legislation therefore requires that pesticides are effective



## The Legislation



- EC Directive 91/414 specifies data requirements for the registration of Plant Protection Products
  - A resistance risk assessment is required
  - If there is a risk of resistance developing a management strategy must be designed
  - Products must be effective
    - If resistance develops, approval should be revoked



## PSD's Aims and Objectives

- As part of the strategy for sustainable food and farming, to reduce negative impacts of pesticides on the environment.
- To promote the sustainable use of pesticides



## Resistance Risk Analysis

- Required as part of the registration process
- Conducted according to International Guidelines
- Designed to determine whether the proposed use pattern is acceptable



## Resistance Risk Analysis

- Chemical factors
  - Is the mode of action known
  - Is it the same group as an existing chemical
  - Does it exhibit cross resistance
- Pest factors
  - Does it have a history of developing resistance
  - Have related species developed resistance
- Other factors
  - Laboratory strains
  - Baseline sensitivity

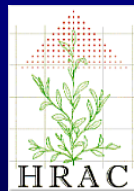


## Risk Management

- If the risk of resistance developing is unacceptable
- A risk management strategy is required
  - Minimising use
  - Monitoring
  - Use of other 'methods of control'
  - Ensuring effective use
  - Communication



# Resistance Management Strategies



# Resistance Management Strategies



## When it goes wrong

- Regulatory concerns
  - Should the use still be approved?
  - Can we prevent further deterioration by implementing a different resistance management strategy?
  - Information dissemination



## QoI resistance

- Claims
  - Deleted mildew in most cases
  - Currently allow Septoria to remain
- Management strategies
  - Funded research
  - Agreed changes to statutory conditions of use and advice on use
- Unsuccessful
  - For Septoria and mildew
  - but not necessarily other diseases.



## DMI Resistance

- Not a new problem
  - Slower moving but more complex than QoIs
- Funding research
- Adding label advice
- Will look at disease control claims at re-registration



## New DMI advice

- [Product] contains a DMI fungicide. Resistance to some DMI fungicides has been identified in Septoria leaf blotch (*Mycosphaerella graminicola*) which may seriously affect the performance of some products. For further advice on resistance management in DMI's contact your agronomist or specialist advisor, and visit the FRAG website.



# Fungicide Resistance – Technical Workshop

- [Judith Turner – Principal Plant Pathologist, CSL](#)
- [John Lucas - Head of Plant-Pathogen Interactions Division, Rothamsted Research](#)
- [Bill Clark - National Cereal Pathologist, ADAS](#)
- [Oliver Macdonald - Senior Fungicide Agronomist, PSD](#)
- [Discussion Session](#)
- [Judith Turner - Principal Pathologist, CSL \(Chair of FRAG-UK\)](#)
- [Judith Turner – Principal Pathologist, CSL](#)
- [Graham Jellis - Director of Research and Development, HGCA](#)

