

International Barley Hub
Industry Advisory Group Meeting
JHI, Dundee
24th October 2018



PhD Studentships

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Leading the way in Agriculture and Rural Research, Education and Consulting

... and partners in postgraduate research and education



AHDB PhD Studentship



Understanding interactions between *Ramularia collo-cygni* and barley leaf physiology to target improvements in host resistance and disease control strategies

Integrated Pest Management

Clarinda Burrell

Supervisors: Ian Bingham (SRUC),
Neil Havis (SRUC),
& Steven Spoel (University of Edinburgh)



BBSRC PhD Studentship



Causes and control of grain skinning in malting barley:
phenotyping and genetic analysis

Grain skinning

Kathryn Grant

Supervisors: Steve Hoad (SRUC),
Maree Brennan
(Université de Lorraine),
& Catherine Kidner
(University of Edinburgh)

Teagasc PhD Studentship



Understanding the control of yield information in two and six row winter barley varieties to target disease management practice

Agronomy

Robert Beattie

Supervisors: Ian Bingham (SRUC),
John Finnan (Teagasc),
John Spink (Teagasc),
& Caroline Nichol (University of Edinburgh)



REG funded PhD Studentship

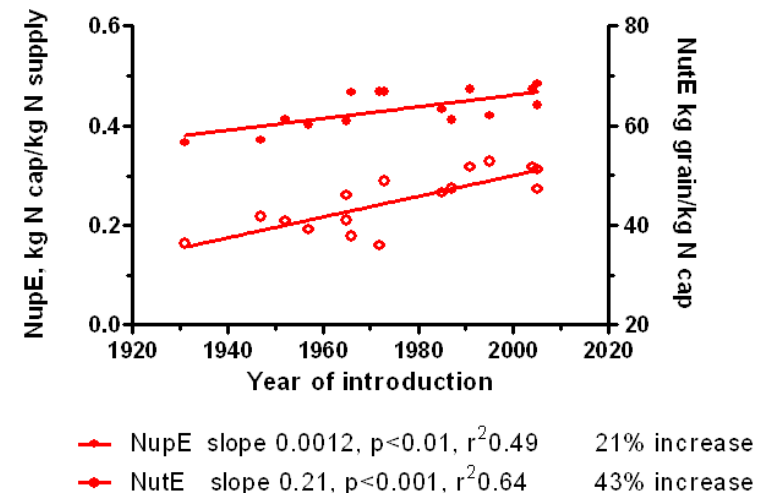


Understanding the physiological and molecular basis of genetic variation in post-flowering N dynamics in Barley to improve N use efficiency

Nitrogen Use Efficiency

Diana Garzon

Supervisors: Ian Bingham (SRUC),
Susanne Barth (Teagsac),
& Peter Doerner (University of Edinburgh)



From: Ian Bingham et al. 2012

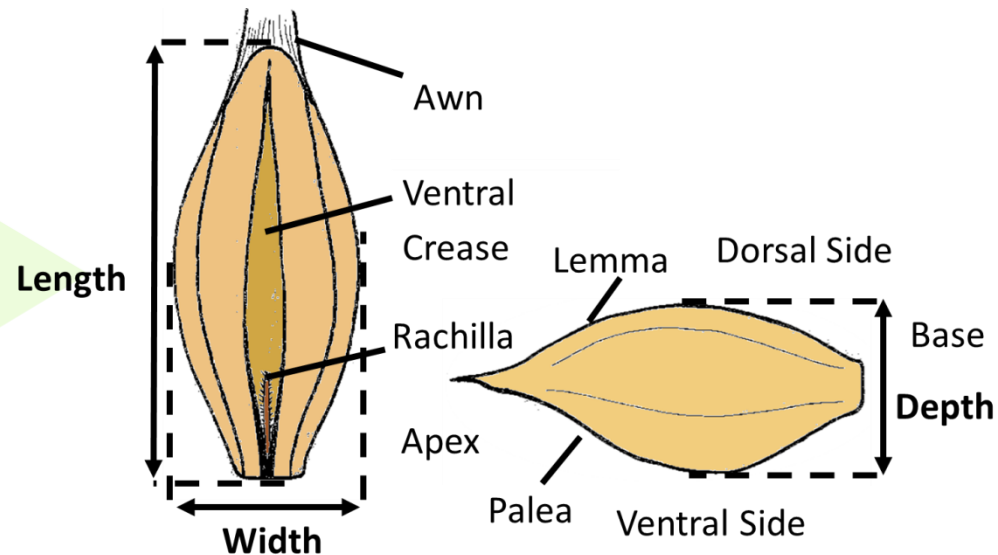
AHDB PhD Studentship



Understanding components of specific weight in barley grains - opportunities for improving grain quality and processing efficiency

Grain quality

Aaron Hoyle



Supervisors: Steve Hoad (SRUC),
Gail Jackson (University of Edinburgh),
& Maree Brennan (Université de Lorraine)

Specific weight in spring barley



- AHDB Studentship – Aaron Hoyle
- Aim: To understand grain components that determine specific weight and how these influence the malting process
- Components of specific weight:
 - Specific Weight = grain density × packing efficiency
 - packing efficiency = grain number × mean grain volume

REG (REF) PhD Studentship



Novel methods for understanding the causes and control of a malting barley grain defect called 'skinning'

Grain skinning

Paulina Okoro

Supervisors: Steve Hoad (SRUC),
Maree Brennan (Université de Lorraine),
& Naomi Nakayama (University of Edinburgh)



Grain skinning and malting quality



- SRUC PhD studentship – Paulina Okoro



- Aim: To quantify the effects of grain skinning on the malting process
- Objectives: (1) To understanding how pre-harvest and crop handling conditions affect husk adhesion and (2) Establish the impacts of skinning on malting parameters

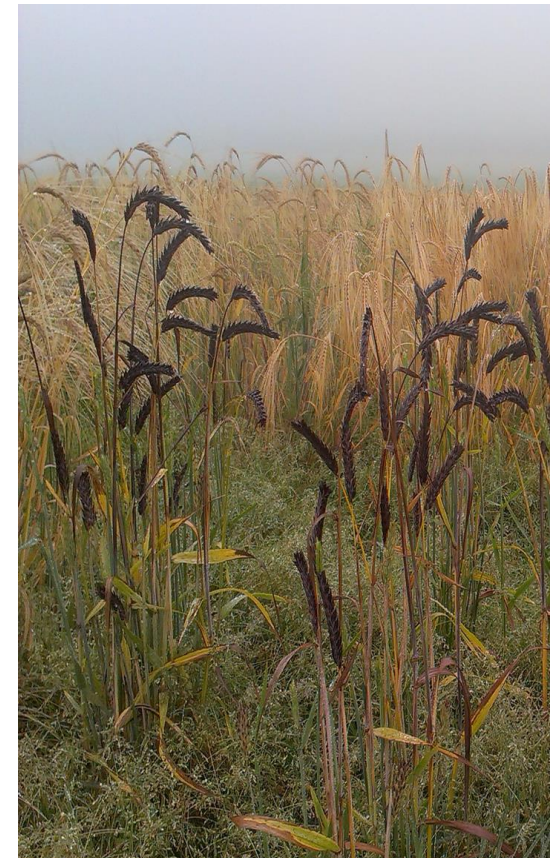
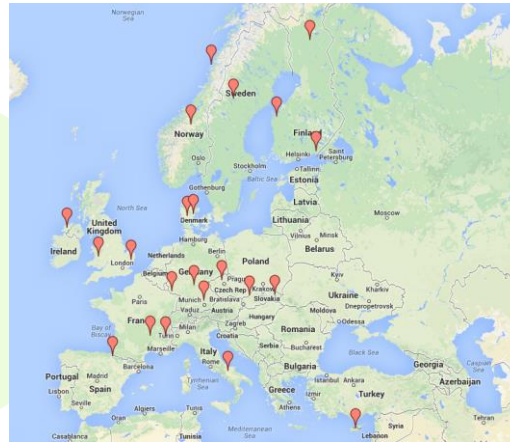
RESAS PhD (Recently Awarded)



Physiological analysis of genetic diversity in photosynthetic capacity in barley

Improved varieties

Anna Florence



Supervisors: Peter Høebe (SRUC),
Richard Ennos (University of Edinburgh),
& Steve Hoad (SRUC)

REG (REF) PhD (Recently Awarded)

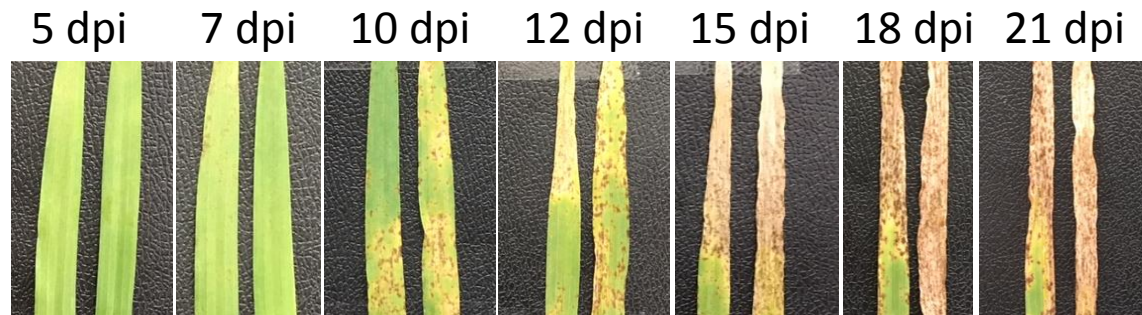


Fighting *Ramularia* leaf spot disease of barley using integrated genetics and genomics

Integrated Pest Management

Francois Dussart

Supervisors: Neil Havis (SRUC),
Graham McGrann (SRUC),
Peter Hoebe (SRUC),
& Steven Spoel (University of Edinburgh)



RESAS PhD (Recently Awarded)

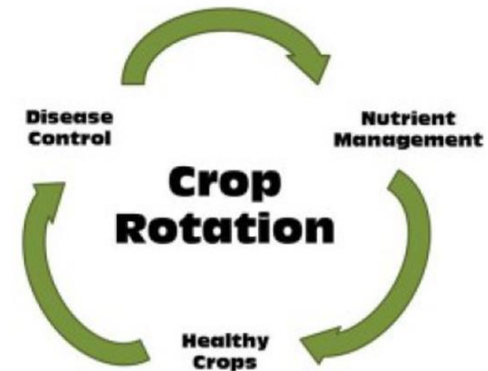
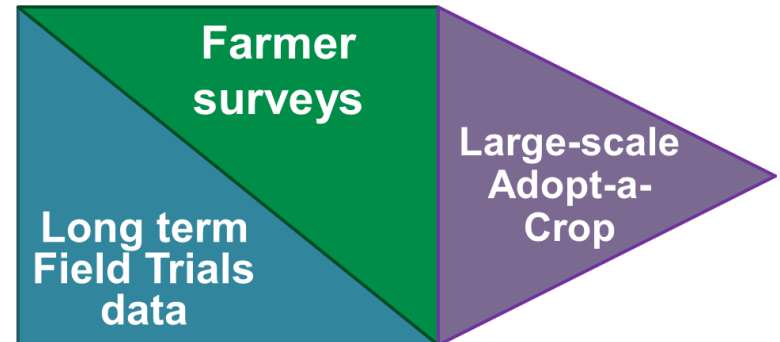


Investigating opportunities for environmental improvements in arable systems using long term Scottish data sets

Integrated Pest Management

Stacia Stetkiewicz

Supervisors: Fiona Burnett (SRUC),
Kairsty Topp (SRUC),
Richard Ennos (University of Edinburgh)
& Anne Bruce (University of Edinburgh)



Submission to SRUC PhD Call



Understanding the genetic basis for Ramularia resistance in barley

Integrated Pest Management

To be confirmed

Supervisors: Neil Havis (SRUC), Francois Dussart (SRUC),
Fiona Burnett (SRUC), Joanne Russell (JHI) & Mark Loosley (JHI)

Ongoing barley and crop & soils research

Precision technologies

Advanced technologies for efficient crop management: a participatory approach with application at farm scale
(Hoad, Florence & Rees) BBSRC/NERC/ESRC

Integrated Pest Management

Agronomic and disease control techniques to produce a profitable winter barley crop
(Creissen) Loirston Trust

Efficient use of fertilisers and soil health

Effect of legume pre-crop on the following barley crop
(Baddeley) Loirston Trust

Integrated Pest Management

Real time mapping of disease
(Havis) UIF

Integrated Pest Management

Restricting the pathogenic effect on barley of the endophytic fungus *Ramularia collo-cygni* (Havis) Aarhus University

Precision technologies

Demonstrating and promoting the potential benefits of using drone-captured imagery to farmers
(Evans) UIF

Efficient use of fertilisers

Updating N & S fertiliser recommendations for spring barley and potatoes
(Hoad & Bingham) AHDB

Integrated Pest Management

Fungicide performance on wheat, barley & oilseed rape
(Burnett) AHDB