AgriFood ATP

Training and skills development through the BBSRC Advanced Training Partnerships

Professor Jerry Roberts

University of Nottingham

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Harper Adams University College

Cranfield UNIVERSITY

ROTHAMSTED RESEARCH

BBSRC Advanced Training Partnerships

Contents of the talk

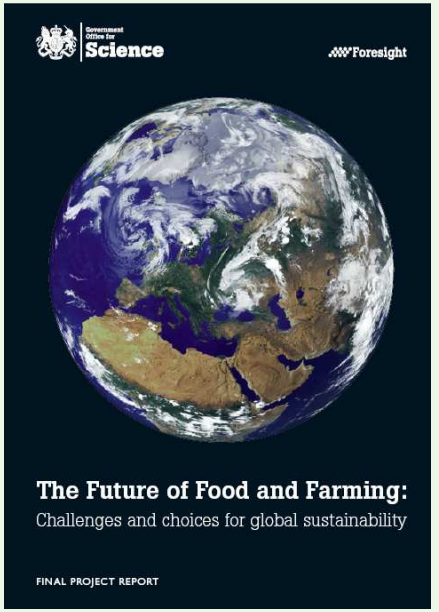
AgriFood ATP

- What have been the drivers to establish ATPs?
- What areas of training do the ATPs cover?
- How was the Nottingham ATP developed and what are its key features?
- What qualifications can an ATP deliver to its participants?
- How can the AgriFood Charities Partnership engage with ATPs?

‘The Future of Food and Farming’ report (2011) concludes that ***“the global food system faces formidable challenges”***

The Five challenges:

1. **Balancing** future supply and demand
2. Ensuring adequate **stability** in food supplies
3. Achieving global access to food and **ending hunger**
4. Managing the contribution of agri-food to the **mitigation** of climate change.
5. Maintaining **biodiversity** and ecosystem services



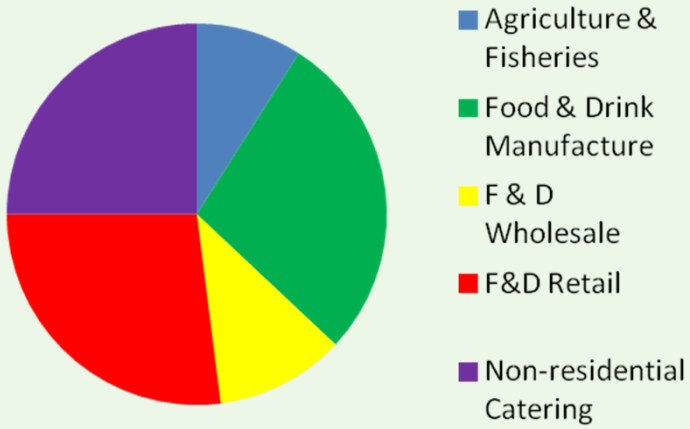
The report recognized that

- UK agri-food sector has a pivotal role in addressing domestic and global food security issues

Food Security in the UK

The Agri-food sector in the UK, from farm to fork,

- Employs 1 in 7 people
- £80 billion– 6.8% to national Gross Value Added (2010)



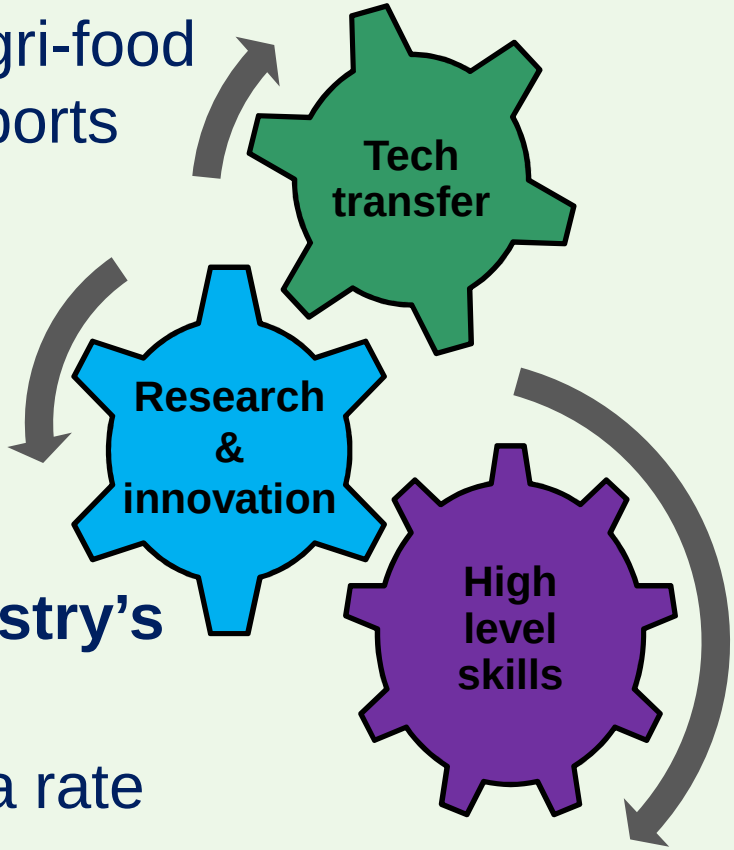
The UK Government's overarching goal is for

- A sustainable diet, which is affordable, safe and healthy, in the UK and globally, with a thriving UK agri-food business sector (GO-Science 2010)
- For the agri-food sector to be underpinned by **research and innovation,** to ensure the development and dissemination of new knowledge, technologies and **skills**

Skills; the driver of innovation

Innovation is a proven driver of economic growth; importance of innovation in agri-food highlighted by several Government reports

(Government Office for Science 2010; DEFRA 2010; DEFRA, 2012)



Levels of available skills affect industry's capacity to innovate

- Absence of high-level skills can be a rate limiting factor in the adoption of new technologies to drive greater productivity
- High-level skills are considered 'research informed' technical expertise

High-level skills in the Agri-Food Sector

The Food Research Partnership (FRP) Skills Sub-Group (2010) report:

- Insufficient knowledge exchange between industry and research base
- Shortage of very high-level Masters and Doctorate skills
- High-level skills are required for the agri-food industry to adopt innovation-led strategy
- Loss of 'niche' skills, developed at postgraduate level, e.g. Crop breeding, large animal research, agronomy, plant physiology/pest management, soil science and horticulture

GO-Science 2010 report recommended the BBSRC's initiation of Advanced Training Partnerships *"to provide a range of **specialist high level training to meet industry needs** in partnership with the higher and further education sectors"*

BBSRC Advanced Training Partnerships

Partnerships: the key to success…

BBSRC Advanced Training Partnerships

BBSRC Advanced Training Partnership:

A £12m initiative to create and develop in meeting high-level skills needs

Promoting creation of **sustainable partnerships** between public and private sector organisations to establish **long-term mechanisms** to meet emerging skills needs

<u>Aims to provide:</u>

- High-level training and professional development - for specialist staff **already employed within the sector**
- Flexible training at postgraduate level e.g. CPD, PGCert, PGDiploma, Masters, Professional Doctorate

The Partnerships

www.bbsrc.ac.uk/atp

BBSRC bioscience for the future

BBSRC Advanced Training Partnerships

Aberystwyth University

(Jamie Newbold)

Sustainable and efficient food production

Bangor University, the National Institute of Agricultural Botany, and a number of industrial partners

Pasture based agriculture, focusing on increasing efficiency and reducing environmental impact of extensive beef, sheep and dairy farming

University of Nottingham

(Jerry Roberts)

Establishment of a strategic training hub for the advancement of the UK agri–food industry

Harper Adams University College, Cranfield University, Rothamsted Research, and a number of industrial partners

Spanning the entire agri–food chain, including soils, water, crops, animals, post–harvest, food and nutrition

University of Reading

(Richard Frazier)

Food quality and health – Sustaining the future

Rothamsted Research, University of Birmingham, Leatherhead Food Research, and a number of other industrial partners

Food chain from production to consumption

Royal Veterinary College

(Stephen May)

Advanced training in intensive livestock health and production

University of Cambridge, University of Newcastle, University of Edinburgh and a number of industrial partners

Focusing on the pig and poultry industry, to provide specialist training to veterinarians as well as other animal scientists

The AATP Consortium AgriFood ATP

- University of Nottingham ~ Sutton Bonington Campus
  Top in RAE 2008 (UoA 16 ~ Agriculture, Veterinary and Food Science) based on Research Power
- Cranfield University
  Leading provider of postgraduate training in Agriculture and Environment
- Harper Adams University College
  Leading provider in Higher Education for Sustainable Food Chain, Rural Economies and Land-based studies
- Rothamsted Research
  Largest agricultural research centre in the UK for Sustainable Crop Management and its Environmental Impact

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Co-ordinating training in the Agrifood sector

AgriFood ATP

- LANTRA
- Agriskills forum
- Landex Colleges
- Universities
- Professional Qualifications (e.g. BASIS Certificate in Crop Protection)

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Main stages of education/training	QCF Level	Typical qualifications within each level	Available/coordinated by
Professional or postgraduate education, research or employment. Higher education Advanced skills training. Entry to professional graduate employment. Specialised education and training.	8	Doctoral degrees (e.g. PhD/DPhil, Professional Doctorate). Vocational Qualifications Level 8.	Universities **Advanced Training Partnerships**
	7	Master's degrees (e.g. MSc, MA, MRes, MPhil). Postgraduate diplomas. Postgraduate certificates. Fellowships, NVQ level 5. Vocational Qualifications Level 7.	
	6	Batchelor's degrees. Graduate diplomas. Graduate certificates. Vocational Qualifications Level 6.	Universities and Colleges
	5	Foundation degrees. Higher National Diplomas (HND). NVQ Level 4. Vocational Qualifications Level 5.	Universities and Colleges
	4	Higher National Certificates (HNC) Certificates of Higher Education (Cert HE) Vocational Qualifications Level 4.	Colleges
Qualified/skilled worker. Entry to higher education. Completion of secondary education.	3	Work Based Diploma /Certificate Level 3 Vocational Qualifications Level 3. E.g. BTEC Nationals (certificate/subsidiary diploma/diploma/extended diploma) GCE AS and A levels. Advanced Diplomas	Colleges School 6th Form
Progression to skilled employment. Continuation of secondary education. Secondary education. Initial entry into employment or further education.	2	Work Based Diploma /Certificate Level 2. Vocational Qualifications Level 2. E.g. BTEC level 2 Firsts (Certificate/Extended Certificate/Diploma). GCSEs at grade A*-C.	Colleges and schools
	1	Work Based Diploma / Certificate Level 1. Vocational Qualifications Level 1. E.g. BTEC Level 1 Qualifications (award/certificate/diploma) GCSEs at grade D-G. Foundation Diplomas	Colleges and schools

Our ATP Vision

AgriFood ATP

- Spans the entire Agri-Food supply chain
- Customer driven ~ flexible and responsive
- Provides training from CPD to PhD
- Establishment of a vibrant community engaged in knowledge exchange
- Financially sustainable by year 7

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AgriFood ATP

Spans the entire Agri-Food supply chain

Animals

Crops

Food and Nutrition

Natural Resources → Production systems → Processing & packaging → Product Quality → Retailer → Consumer

Transferable skills

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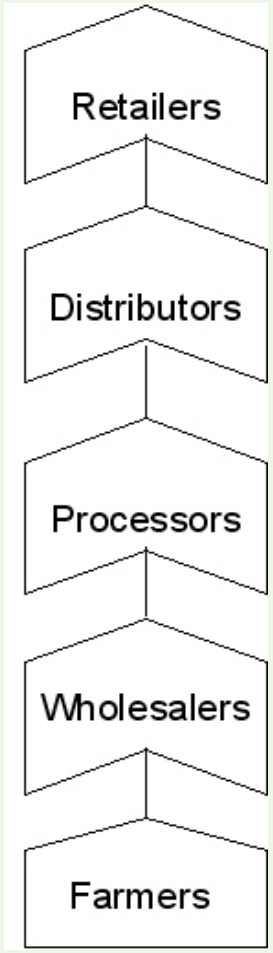
Customer driven

AgriFood ATP



AHDB Agriculture & Horticulture DEVELOPMENT BOARD

Sainsbury's Try something new today

KRAFT

KERRY

CFA CHILLED FOOD ASSOCIATION

ASDA part of the WAL*MART family

HGCA

UNIVEG Cycle of Freshness

Waitrose

DairyCo

BPEX British Pig Executive

YOUR M&S

Northern foods

Masterfoods

BASF The Chemical Company

POTATO COUNCIL

PEPSICO INTERNATIONAL

Campden BRI food and drink innovation

Nestlé Good Food, Good Life

BAKKAVÖR

NFU

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Flexible and responsive

AgriFood ATP

- Industry representation on Management Board

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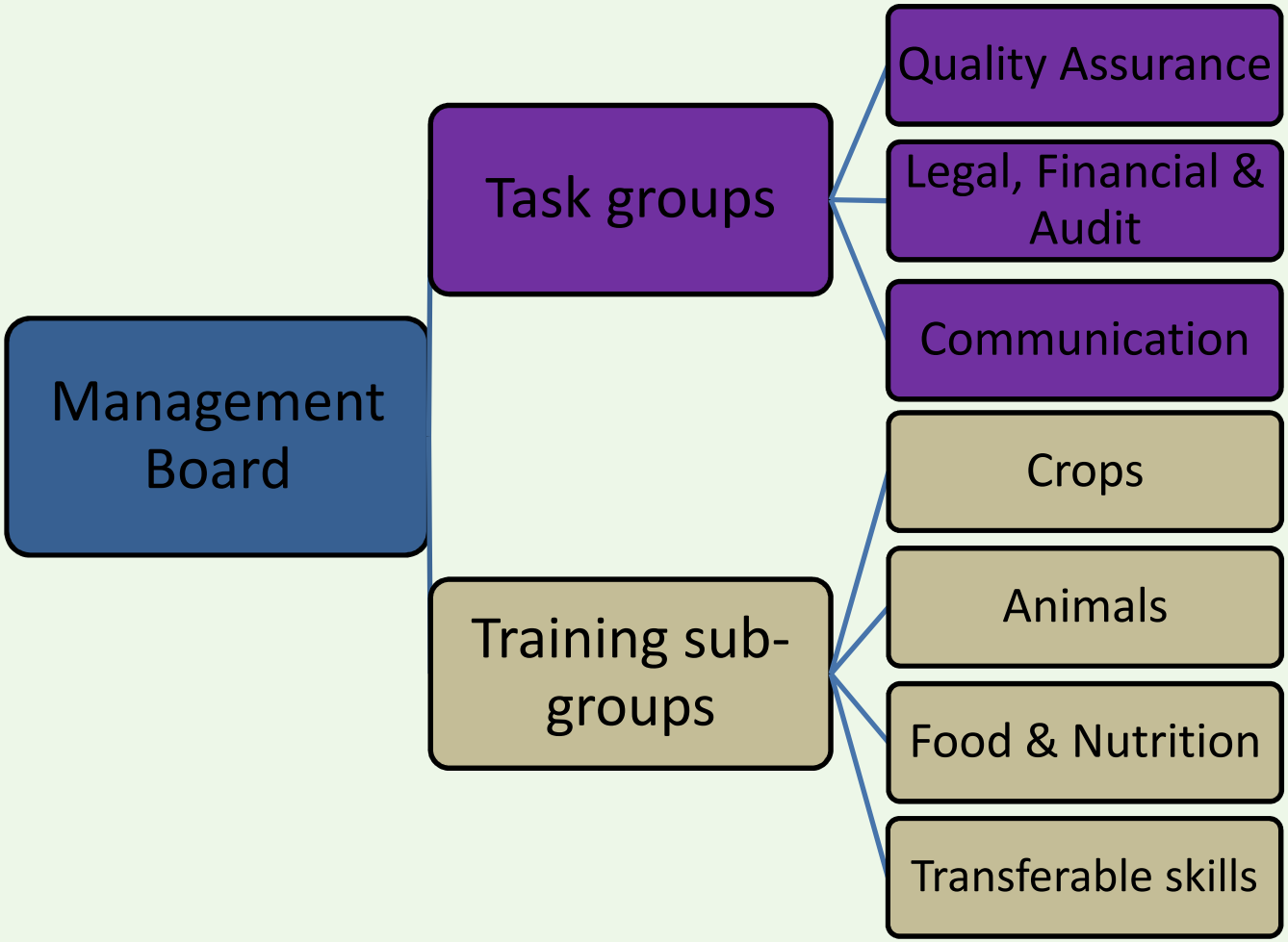
Governance structure

AgriFood ATP



Management Board

Membership

Jerry Roberts (UoN,Chair)

Ian Connerton (UoN)

Julian Wiseman (UoN)

Debbie Sparkes (UoN)

Lin Field/Pam Chambers (RRes)

Peter Mills (HAUC)

Tim Hess (CU)

Deborah Kendale (Partnership Manager)

Lord Haskins

Ian Crute (AHDB)

Tom Jenkins(BKTN)

Steven Walker (Cam BRI)

Helen Ferrier/ Andrea Graham (NFU)

Kaarin Goodburn (CFA)

Mary Bosley

Terms of Reference

Oversight of the Partnership and strategic direction;

Approval of budgets to activities;

Sign-off of annual report to BBSRC;

Reporting from Training sub-groups and task groups;

Set up and closure of task groups;

Frequency: half-yearly

Flexible and responsive

AgriFood ATP

- Industry representation on Management Board
- Industry Chairs of Training Sub-Groups, plus wider representation within groups

Training sub-groups

Membership

Crops:

Rosie Bryson (BASF, Chair)

Debbie Sparkes (UoN, Co-Chair)

Keith Chaney (HAUC)

Tim Hess (CU)

Pam Chambers (RRes)

Caroline Nicholls (HGCA)

Jon Knight (HDC)

Mike Storey (PC)

Sarah Cowlrick (AICC)

Claire Bend (Agrii)

Animals:

Kim Matthews (EBLEX, Chair)

Julian Wiseman (UoN, Co-Chair)

Kin-Chow Chang (UoN)

Carwyn Ellis (HAUC)

Derek Armstrong (BPEX)

Duncan Pullar (DairyCo)

Elizabeth Berry (DairyCo)

Phil Sketchley / Donal Murphy (NOAH)

Food and Nutrition:

Betrand Emond (Cam BRI, Chair)

Ian Connerton (UoN, Co-Chair)

John Brameld (UoN)

Leon Terry (CU)

Ralph Early (HAUC)

David Northcroft (Waitrose)

Mark Shippey (Samworth Brothers)

Helen Sisson (Greencore)

Transferable:

Mary Bosley (Chair)

Tim Hess

(Cranfield, Co-Chair)

Rosie Bryson (BASF)

Debbie Sparkes (UoN)

Kim Matthews (EBLEX)

Julian Wiseman (UoN)

Betrand Emond (Cam BRI)

Ian Connerton (UoN)

Pam Chambers (RRes)

Martin Wilkinson (HAUC)

Terms of Reference

Development & management of industry-informed training programmes;

Consulting with industry and responding to industry requirements;

Training-related expenditure (student bursaries, delivery costs);

Activity reporting to Management Board;

Frequency – at least quarterly.

Flexible and responsive

- Industry representation on Management Board
- Industry Chairs of Training Sub-Groups, plus wider representation within groups
- Annual congress– vehicle for ATP partners and participants to provide feedback

Provides training from CPD to PhD

CPD & short courses

- 1 day workshops
- Field days
- Accredited training courses
- Seminars
- Annual symposium

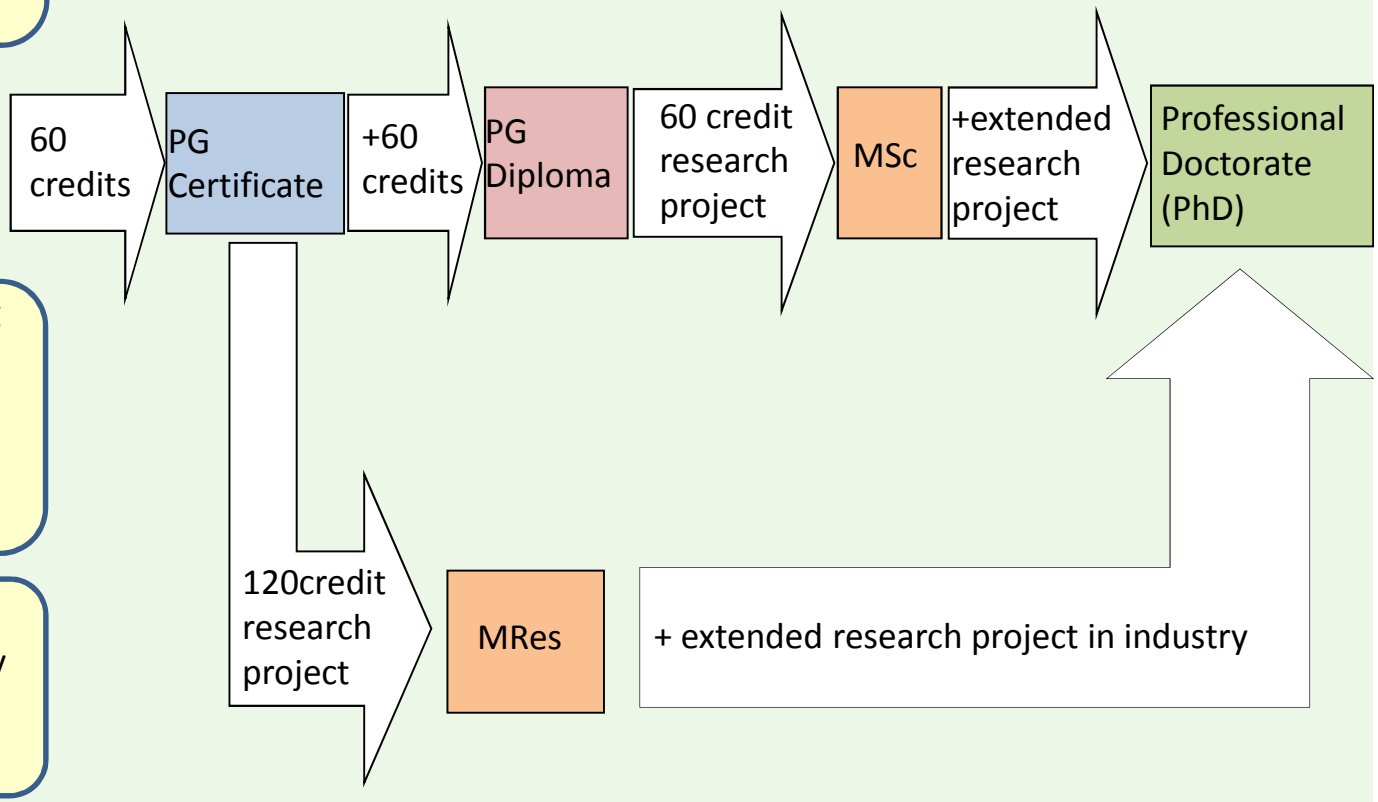
Credit bearing modules

- Generic training modules (e.g. stats, research skills, presentation skills)
- Work-based training module
- Specialist training modules selected from range of modules offered by ATP partners
- Thesis modules supervised jointly by academic and industry partners

Delivery by training days, CPD points, individual modules (taught and blended learning)

Modules validated by an academic validation panel

10 credits = 100h of study



Crop-oriented MSc Pathway

CU HAUC UoN RRes

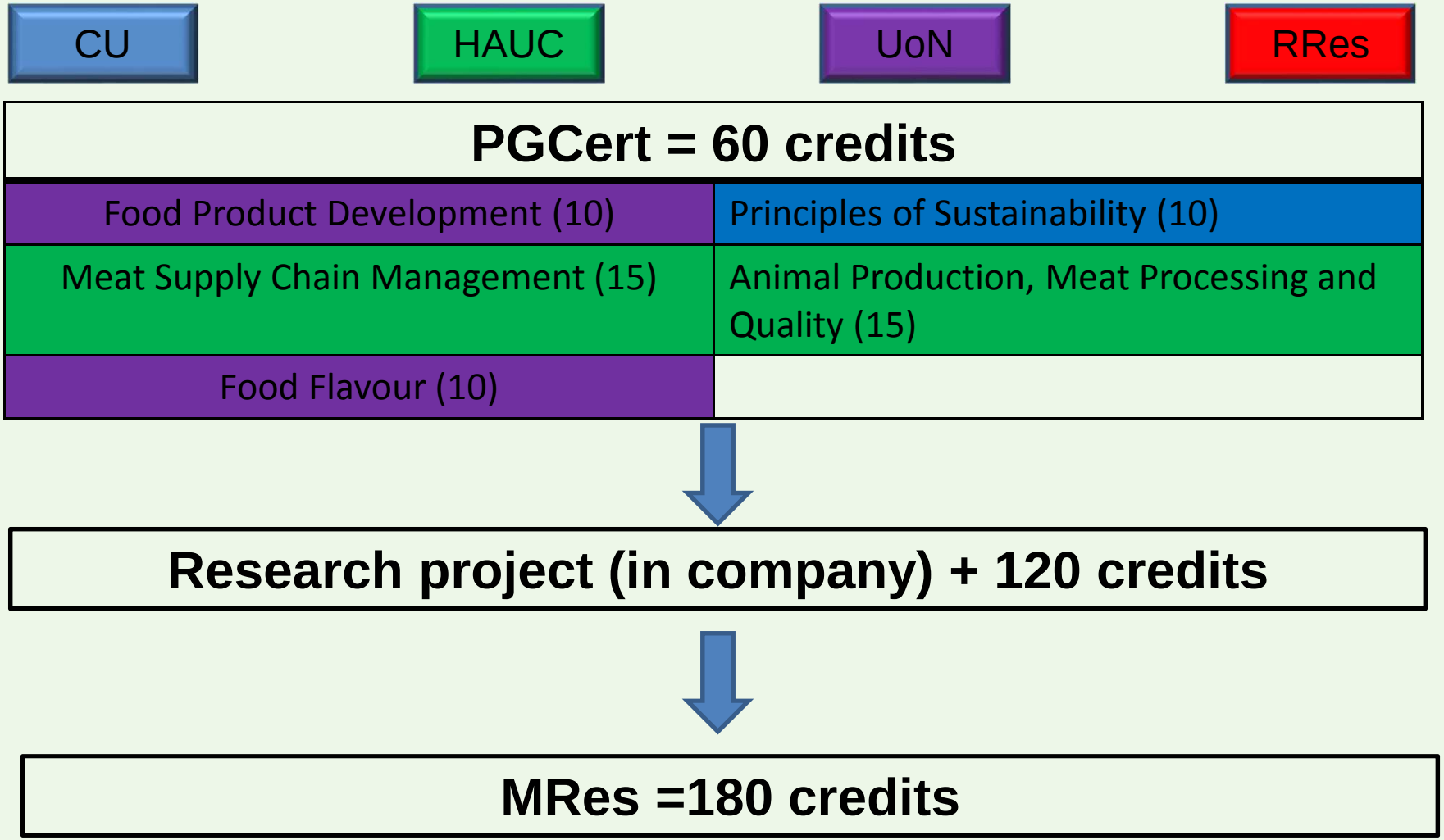
PG Diploma = 120 credits

Principles of Sustainability (10)	Statistics & Experimental Design (10)
Resource Capture by Crops (10)	Soil Erosion Control (10)
Current Research in Crop Protection (15)	Integrated Farm Management (15)
Genetic Improvement of Crop Plants (20)	
Potato Production and Management (30)	

Research project (in company) + 60 credits

MSc =180 credits

Food/Animal-oriented MRes Pathway



Collaborative training

AgriFood ATP

Advanced Practitioner in Potato Production and Management

Unit	Training Provider
Foundation in Potatoes*	Cambridge University Farm
Water and Irrigation Management	Cranfield University
Soil Management and Cultivations	Harper Adams University College
Crop Protection	Harper Adams University College
Post-Harvest Management	Sutton Bridge Crop Storage Research
Advanced Storage	Sutton Bridge CSR and Cranfield University
Supply Chain Management	Cranfield University

* Core module.

For 30 credits students must attend core module plus 4/6 optional modules.

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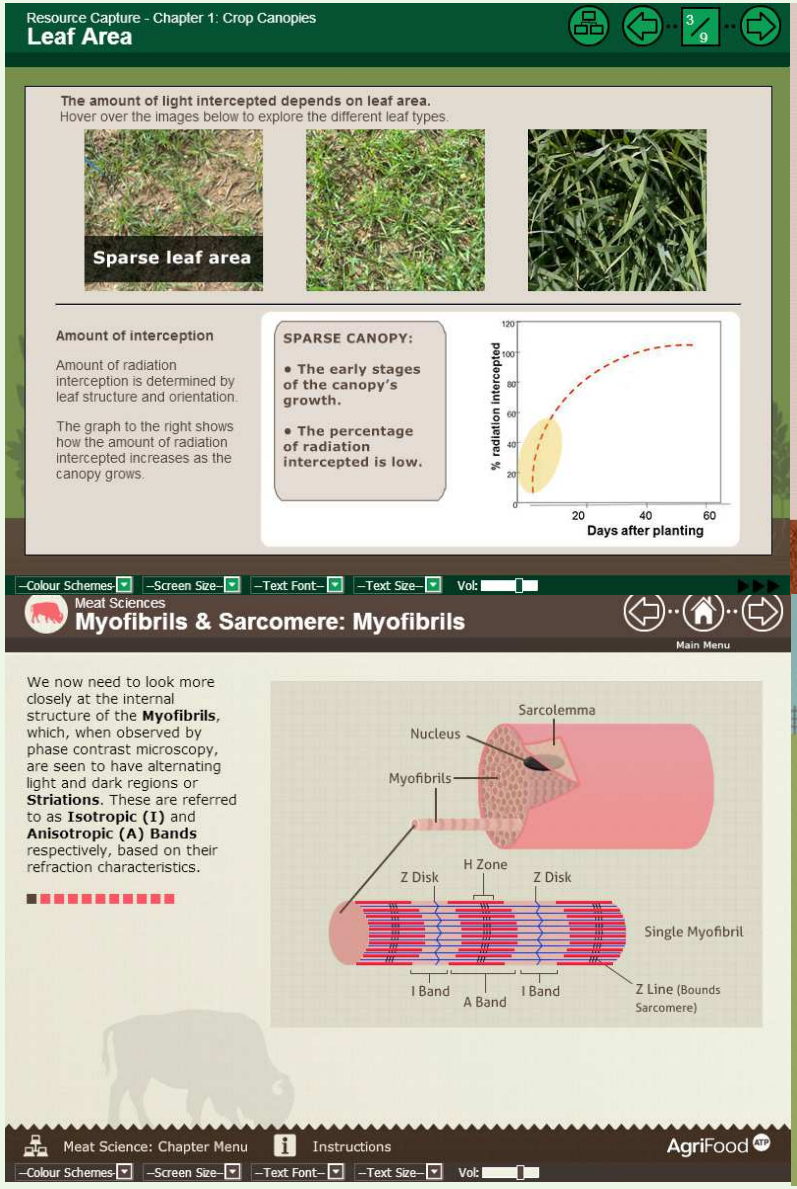
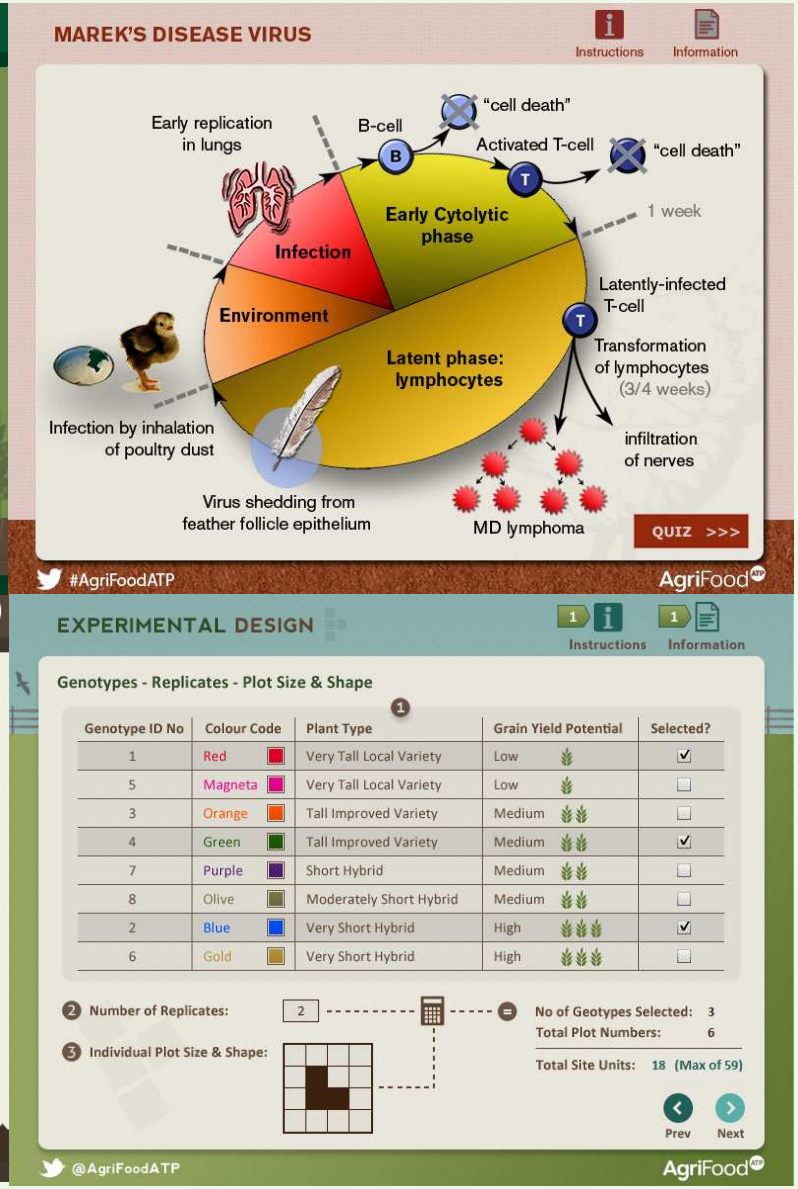
E-learning courses for the AATP





Research degrees

AgriFood ATP

- Part time research degrees registered at one of the academic partners
- Professional Doctorate (D. Agrifood)
  - 120 credits taught modules,
  - Original research project, in company





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Accreditation

AgriFood ATP

- Accreditation for CPD achieved by working with professional associations (BASIS, IFST, BSAS).
- Accreditation for higher degrees through academic partners.
- New Professional MSc in AgriFood due to be launched by Nottingham, with modules selected from across the Partnership.
- Credit transfer between ATP consortia.
- Industrial experience and prior learning recognised to meet entry standards.

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Community development

- Annual congress
  - Speakers from industry and academia
  - Thesis presentations
  - Debates
- E-community
  - Virtual common room
  - Twitter @AgriFoodATP
  - Linked-In
  - Facebook

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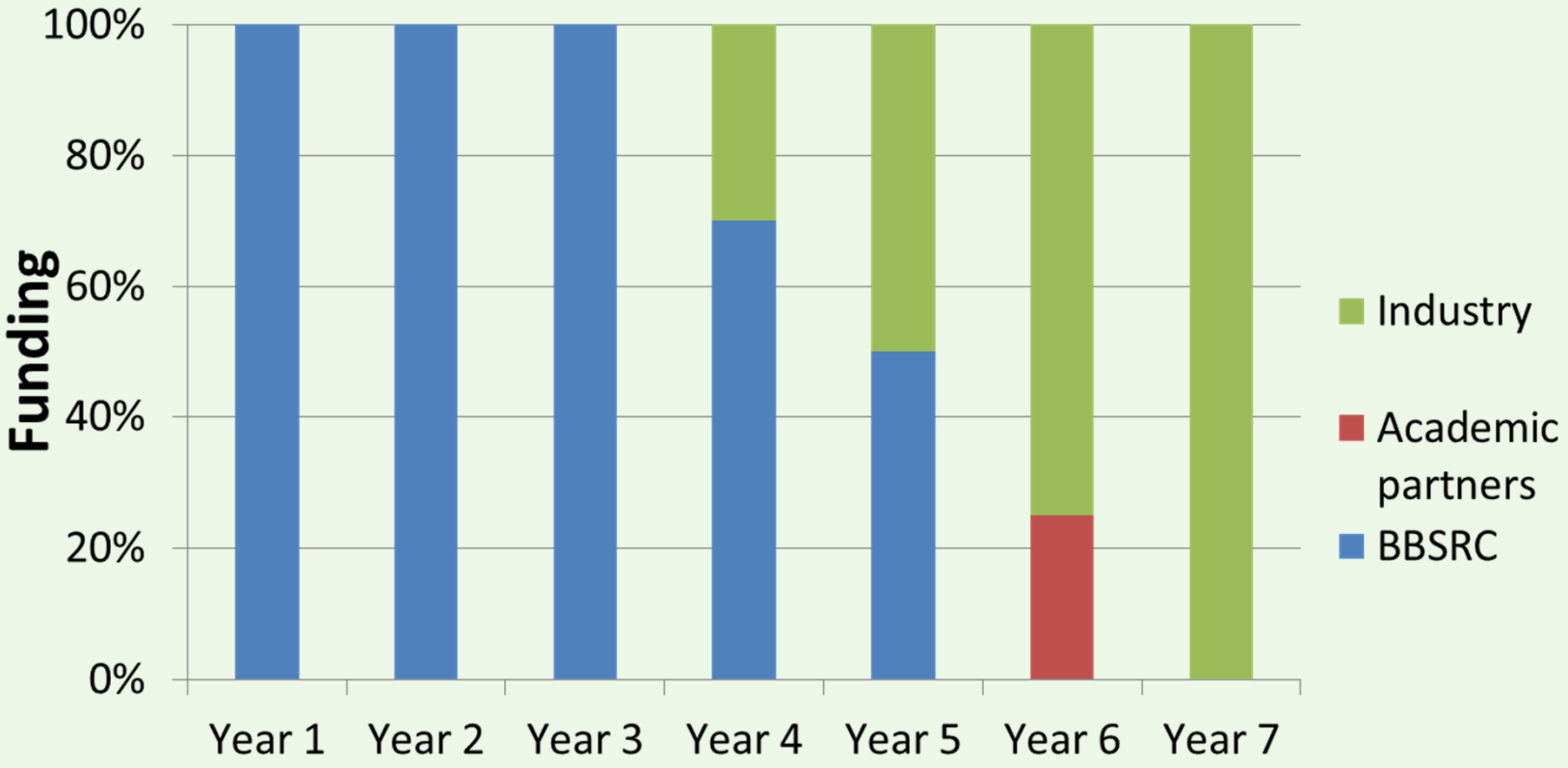
Training bursaries

AgriFood ATP



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How can AgriFood Charities Partnership engage with ATPs?

- Communicate ATP activities to its members
- Provide support to individuals to participate in training
- Help steer ATPs towards the delivery of courses to benefit British agriculture

Summary

- ATPs established to provide a range of specialist high level training to meet industry needs
- Training is provided across the Agri-food chain
- Nottingham ATP developed in collaboration with the Agri-food community and is highly flexible
- Participants can do CPD accredited courses through to Professional Doctorates
- The AgriFood Charities Partnership can provide funding to support participants and help shape community development and knowledge exchange

The ATP Vision

AgriFood ATP

- Provides a range of specialist high level training to meet industry needs
- Spans the entire Agri-Food supply chain
- Customer driven ~ flexible and responsive
- Provides training from CPD to PhD
- Establishment of a vibrant agri-food community engaged in knowledge exchange
- Pump primed by BBSRC then funded by industry and the agri-food community

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Where are we now?

BBSRC bioscience for the future

AHDB Agriculture & Horticulture Development Board

Campden BRI food and drink innovation

BRITISH SUGAR

Masstock SMART FARMING

BASIS

BASF The Chemical Company

BSH

KERRY

NFU

Portfolio of flexible training and qualifications to suit the end user and fit around existing work

Northern Foods

YOUR M&S

POTATO COUNCIL

Waitrose

gsk GlaxoSmithKline

Nestlé Good Food, Good Life

NOAH

BAKKAVÖR

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Developing high level skills in the agri-food sector

joining forces