BBSRC

Funds research in:

Microbes

•Tools/techn

BIS

ology for biological

Provide strategic funding to Pirbright and

Innovate UK (formerly TSB)

•Role is to stimulate innovation, working with

business and other partners, in order to

•Non-Departmental Public Body

accelerate economic growth

Royal Society for the Protection of Animals (RSPCA)

Improve welfare of pets, farm, wild & research animals. •Advice & treatment •Rehabilitation & rehoming

Animal Health Trust Research new diagnostic tests. treatments & vaccines
•Inherited/infectious disease •Clinical research •Disease surveillance .Diagnostics/DNA testing: horses,

Public Health England (PHE)

DH

Porton: specialist & reference microbiology services for high containment pathogens.
•Research, testing, evaluation Biopharmaceutical manufacture •Emergency preparedness & response New & emerging diseases Culture collections

Colindale: specialist & reference microbiology services, infectiou disease surveillance, outbreak investigation.
•Advice & issue of vaccines Microbiological services •Public health related research

Outbreak response, coordination &

South Mimms: National Institute for

Food Standards Agency (UK)

Non ministerial government department Protects public health

DEFRA

Animal Plant Health Agency (APHA)

Executive agency of Defra with responsibility for animal and plant health. It covers a range of animal issues (including animal products, non-native species and wildlife), and specific areas of plant and bee health (complementary to FERA's remit).

It operates via a range of disciplines: bacteriology, parasitology, virology, pathology epidemiology and biomaths (including modelling), animal sciences, immunology,

Capabilities include Provision of national and international reference laboratories Surveillance and research •Expert advice and consultancy

ports of entry etc. Provision of emergency response and surge Containment laboratories including facilities

for small and livestock animals

Inspections and advisory visits on farms, at

Inspectorate (PHSI) and the inspectorat element of the National Bee Unit.

CEFAS

Executive agency of DEFRA

*research, advisory, consultancy, training & monitoring
•EU/UK National Reference Laboratory for

bacteriological & viral contamination of bivalve •OIE Collaborating centre for aquatic animal

•Reference lab for crustacean disease

Facilities: •Laboratories

•Research vessel

VMD

Executive agency of DEFRA Responsible for issues concerning the use & manufacture of vet medicines

Agriculture and Rural Development

DARD NI

Responsible for food, farming, environmental policy & the development of the rural sector in NI It provides a veterinary service with administration of animal health &

NORTHERN IRELAND

EXECUTIVE

Agri-Food and **Biosciences Institute**

(AFBI) NI

A DARD Non Departmental Public Body responsible for carrying out high technology R&D, statutory, analytical & diagnostic testing in relation to animal health/welfare and plant health.

•Cattle, pig, sheep, poultry, fish &

Diagnostics & Analytical: ·Animal disease diagnostics •Anthelmintic resistance testing
•Cattle health schemes Disinfectant testing •Fish disease service •TSE surveillance

•DNA testing
•Pig research & development

Food Standards Agency

Northern Ireland

SCOTTISH **GOVERNMENT**

Enterprise,

Environment and Innovation DG

Directorate for Agriculture **Food and Rural** Communities

Science and Advice for Scottish Agriculture (SASA)

Research & advice •Wildlife disease •Wildlife crime investigation Pest control

Directorate for Marine Scotland

Marine Scotland Science

Research & advice
•Marine & fisheries •Aquaculture •Fish health Freshwater fisheries •Sea fisheries

Directorate for Environment and Forestry Rural and Environment Science and Analytical

Research Funding, analysis and advice Agriculture Animal Health and Welfare
 Food and Drink

Services (RESAS)

•CoE - EPIC

Food Standards Agency in Scotland

(to be replaced by Food Standards Scotland in April 2015)

WELSH GOVERNMENT

Department for Natural Resources

Three Directorate: •Office of the Chief Veterinary

Agriculture, Food and Marine

Natural Resources Wales

(Countryside Council for Wales, Forestry Commission Wales, Environment Agency Wales)

Food Standards Agency Wales

INTERNATIONAL

OIE

World Organisation for Animal

Health International Reference

Laboratories

WHO

OECD

International Animal Health & Welfare evidence

EU Reference

Laboratories

Implementation of EU legislation or animal health

EFSA

Scientific advice & communication on risks associated with the food chain

DG-SANCO (EC)

Standing Committee on the food chain & animal health (SCOFCAH) -

DG - Research & Innovation (EC)

Research (STAR-IDAZ, €481,635) Project partners: DEFRA, BBSRC

INDUSTRY

Industry (Livestock)

•PEX •EBLEX •BTA DairyCo

LGC Ltd.

•Mass screening of food products Animal Health Testing

AHDB

Levy Board representing cattle, sheep, pigs, milk, potatoes, cereals oilseeds & horticulture

Industry (Pharmaceutical)

•Meriel

VetCompass ADAS (consultancy) Veterinary practice knowledge hub Animal Health & Welfar Biological diagnostics Quality of life of companio

SAC Consulting nimal Health & Welfar

DuPont

•DuPont is a global science company, with a division dedicated to research of crop science and manufacture of

Moredun Scientific

Biological diagnostics

animals. Part of the Royal Veterinary College (RVC)

Syngenta

seeds and agrochemicals Also involved in biotechnology and genomic research.

ACADEMIC INSTITUTIONS IN THE UK AND INTERNATIONAL INSTITUTIONS

HEFCE, HEFCW & SFC

with significant source of capability. Examples include **Cardiff University** Aberystwyth

Oxford Wageningen **Bangor** Liverpool **Queens University** Warwick

Bristol Newcastle Reading

Cambridge **Nottingham**

Scotland's Rural College (N.B. This is not a complete list) **Veterinary Schools and other Veterinary Institutions**

RESEARCH INSTITUTES IN THE UK

The Pirbright Institute

BBSRC funded. The primary focus of research a The Pirbright Institute is to prevent virus diseases of livestock and virus transmiss from animals to humans. Its research spans fundamental studies, through to vaccine development and diagnostics:

•Viral diseases of farm animals

- •Reference lab for several viruses (FMD,
- Blue Tongue, Rinderpest etc.) •High containment facilities •Compton/Pirbright laboratory Cattle/poultry pathogens

The Roslin Institute

Part of Edinburgh University, BBSRC funds Genetics

 Avian research (with Pirbright) •Produce & maintain chickens

•Neurobiology
•Infection & immunity

The James Hutton Institute

Scottish Government Public Body Centre for Human & Animal Pathogens in the Environment (HAP-E)

Facilities & capabilities:

•Molecular & microbiology laboratories •Climate-controlled laboratories •Farms & research stations (Glensaugh Hartwood, Balruddery) •Genomics & transcripto

•Catchment processes & modelling

•GIS-based predictive modelling

Institute

Main source of funding is the Scottish

Moredun Research

Virology Parisitology •Diagnose, monitor & horizon scan for livestock diseases in Scotland .Commercial work: proteomics

Partnerships with Glasgow

AgResearch (NZ), Stirling et

•Scotland's Rural College Moredun Research Institute

•Royal (Dick) School of Veterinary

Easter Bush Research

Aim to streamline research on animal

diseases & its implications for human

Consortium

Collaboration between

Scotland's Rural College (SRUC)

•Further Education and Research Institute •Focusses on agriculture

BIS

Department for International Development (DFID)

DEFRA

NORTHERN IRELAND **EXECUTIVE**

SCOTTISH GOVERNMENT

Enterprise, Environment

Directorate for Agriculture,

Food and Rural Communities

Science and Advice for Scottish

•Pest and Pathogen diagnostics & surveillan •Molecular Genotyping

Epidemiology and population dynamics

nt health advice & licencing R&D

and Innovation DG

Agriculture (SASA)

WELSH GOVERNMENT INTERNATIONAL

Health & Safety Executive (including Chemicals **Regulation Directorate)**

NGOs,

Charities etc

tion & identification

Royal Society of Wildlife

Umbrella organisation for 47 Wildlife Trusts

Royal Horticultural

•Plant cultivation & identifi •Plant pathology research

National Trust

Society

Animal Plant Health Agency **Forestry Commission** (APHA)

ecutive agency of Defra with responsibility or animal and plant health. It covers a range on inimal issues (including animal products, nonative species and wildlife), plant and bee

APHA incorporates both the Plant Health Seed alongside the GM Inspectorate and the delive inctions of Plant Variety & Seeds (PVS). Its esponsibilities in this area include •Import inspections

Monitoring & surveillance

Plant passporting and certification

Forest Research Executive agency of the FC
Evidence base for UK forestry practices. Research & field stations (Alice Holt Lodge, Northern Research Station)
•Protection of woodlands from pests & diseases

Provides strategic funding to John Innes Centre and Rothamsted Research (see *Research* nstitutes).

Co-funding with DEFRA, BBSRC, NERC, Scottish

Centre for Ecology and

Public-sector research centre. Part of NERC. •Research, monitoring & managing plants &

Hydrology (CEH)

ology for biological research

Department of Agriculture and Rural Development Northern Ireland (DARD NI)

Agriculture and Rural

Development

Food, farming, environ development of rural sector in NI.
Agri-food Inspection Branch implement

•Surveys & inspections •Ensuring compliance
•Implementing controls

Forest Service NI

relation to

•arable crops

•horticulture

Surveillance

Executive agency of DARDNI

•FS Plant Health Inspection Branch monito the health of trees & woodlands in NI and

through liaison with DAFM in the Republic of Ireland: Implements statutory plant hea controls and guidance with compliance in

•trees and the wider environment

Responsibilities include:

Directorate for Environment and Forestry

and Analytical Services (RESAS) search Funding, analysis and advice •Agriculture

Rural and Environment Science

•Food and Drink

Forestry Commission Scotland

Non-ministerial government department.

Part of Forestry Commission. Advises & implements forestry policy to •Import inspections •Certification schemes and plant passp support Scotland's forests. •Phytophthora ramorum grant support •Chalara grant support mergency response

Newcastle

Nottingham

Queens University

Oxford

Royal Botanic Garden Edinburgh

Executive non-departmental public body of Scottish Govern Research and education

Scottish Natural Heritage Government, Invasive species

Natural Resources Wales

Countryside Council for Wales, Forestry commission Wales, Environment Agency

onitor forest production & tree health

National Botanic Garden of Wales

 Education & conservation •Herbarium & collections
•Welsh flora DNA barcode library

EU Member States

EPPO

Plant protection organisation Identifying species for quarantine •Promote pest control methods

DG-SANCO (EC)

ntation of EU laws on safety of food &

standing Committee on Plant Health & Annexe Science, policy/regulation expertis

EFSA

Panel on Plant Health Plant Health Unit Risk assessment ·Advice to risk managers

CABI

(Centre for Agriculture and Biosciences Inter-governmental organisation Support industry, academia & agriculture in:

•Microbial identification Culture collection •Training & consultancy
•Field trials

FERA

FERA provides diagnosis, applied research advice and contingency response in plant and bee health, including crop protection. It operates via a range of disciplines: Bacteriology, Virology, Pathology, Entomology, Nematology, Epidemiology and Biomaths (including modelling), and molecular biology

 Horizon scanning Expert advice and consultancy Provision of emergency response
 Provision of training to front line

•Specialist containment facilities for esearching quarantine pests and disease JNCC

RBG Kew

Non-departmental Public Body •Research science of plants

Advice, instruction & education

•Quarantine •Herbarium/Living plant collections

HEFCE, HEFCW & SFC

Bangor

Bristol

Cambridge

Aberystwyth (IBERS)

n-departmental Public Body Statutory adviser to government and DA on UK and international nature •Ensure plant health issues that impact wild

Manages the public forest estate in England

Climate change impacts & environmental monitoring

health regulations for trees in GB

•Monitoring & surveillance for plant health protected zone surveys
•Part of the UK Plant Health Service (with PHSI & DA) Implements plant

plants are appropriately considered
•Spread and impacts of pests & diseases (using biodiversity data). •Biological Records Centre (with CEH)

Natural **England**

animals at population & ecosystem level Non-departmental Public Body Plant disease & pes control scheme

BBSRC

ESRC

NERC

The Met Office Executive agency of BIS

Innovate UK (formerly TSB) Non-Departmental Public Body business and other partners, in order to

Dundee

Harper Adams

Imperial College

Liverpool

Agri-Food and Biosciences Institute (AFBI) NI

A DARD Non Departmental Public Body responsible for carrying out high technolog R&D, statutory, analytical & diagnostic testing in relation to animal health/welfare and plant health. •Plant health & seeds •Plant pest & disease diagnostics

per of HE institutions with significant source of capability. Examples include

INDUSTRY

ADAS

Agricultural & environmental consultancy
•Arable crop protection & performance

•Pest & disease management •Weed seed dormancy testing

AHDB

Agriculture & Horticulture Development Board.
A Levy Board representing cattle, sheep, pigs, milk, potatoes, cereals, oilseeds & horticulture.

•Horticultural Development Company (HDC) •HGCA (cereals & oilseeds) •Potato Council

British Society of Plant Breeders

Foresight

Diagnostics for veterinary & plant

SAC consulting Crop advice

Stakeholder Forum

Vita (Europe) Ltd

•Honeybee health •R&D honevbee health

Horticultural Trades Association

Trade association for the UK garden

Mylnefield Research Services Crop research & breeding

Neogen Europe

UK Chemicals

Advice to government on reduction of risks from hazardous chemicals

East Malling products •Containment facilities

•Genetics & crop improver •Pest & pathogen ecology •Plant breeding
•DNA fingerprinting

Crop protection trials

John Innes Centre

 Genetic resources unit •Plant & Microbial Metabolis •Crop productivity & yield Wheat improvement

NIAB

National Institute of Agricultural Botany Research & information centre Plant science, agriculture & food •Genetics & breeding Varieties & seeds

Sainsbury Laboratory (TSL)

Funding from Gatsby, BBSRC, EU and othe research grant funding bodies. Research

> •Plant disease resistance genes •Biology of pathogen effector protei •Innate immune recognition in plants •Signalling and cellular changes during plant-microbe interactions Plant and pathogen genomics
> Biotechnological approaches to crop disease resistance

Sainsbury Laboratory Cambridge University (SLCU)

RESEARCH INSTITUTES IN THE UK

ACADEMIC INSTITUTIONS IN THE UK AND INTERNATIONAL INSTITUTIONS

ssociated with Cambridge University Research to elucidate the regulatory syste underlying plant growth & development
•Biology & biochemistry of host/pathogen

•Disease resistance genes from wild-crop •Plant-pathogen interactions *Bioinformatics & IT Proteomics & Mass Spec •Tissue culture & media services

Synthetic Biology

Rothamsted Research Agricultural research station •Food & energy production

•Wheat productivity & GM •Designing seeds Pesticide resistance •Crop protection National willows collection

Stockbridge Technology Centre

> industry: Integrated Pest Management for protected edible & ornamental crops, & field crops.
> •Efficacy trials for commercial contractors Facilities: protected crop area

Reading

Wageningen

Warwick

Royal Agricultural University

Scotland's Rural College (SRUC) •Further Education and Research Institute in Scotland ocusses on agriculture

The James Hutton Institute Scottish Government Public Body

Land, crops, water & environment Crop productivity Controlling pests & diseases •Centre for Research on Potato & Solanace

•Dundee Effector Consortium Includes former Scottish Crop Research

•Research stations and farms (Balruddery Fari Glenssugh Research station, Hartwood research stations) ·Laboratories (Aberdeen)