SUBMISSION FROM THE JAMES HUTTON INSTITUTE

I wish to submit this document as evidence to the committee as part of their scrutiny of the draft budget.

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Chief Executive
The James Hutton Institute
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About the James Hutton Institute
The James Hutton Institute (JHI) was formed on 1 April 2011 by uniting the Macaulay Land Use Research Institute and SCRI (Scottish Crop Research Institute). The organisation has offices and laboratories in Aberdeen and Dundee and employs over 600 staff. It also supports postgraduate students. Products developed at The James Hutton Institute (and its forebears) are familiar names on supermarket shelves. They include popular raspberry varieties such as Glen Ample and Glen Lyon; potato varieties including Lady Balfour, Anya and Mayan Gold; and our brassicas (swedes, turnips, kale etc.,) dominate the UK market. Research at the Institute also supports development and implementation of Scottish policy in areas such as the Flood Risk Management (Scotland) Act 2009, development of the Land Use Strategy, the Climate Change (Scotland) Act and analysis to feed into Government negotiations on Common Agricultural Policy reform.

Funding of the Institute and its research
The James Hutton Institute receives funding from a range of sources each year. Approximately two thirds of its funding comes from the Scottish Government. The Institute also receives funding from European Union sources, competitive government research contracts and commercial contracts. The draft budget proposes continued but reduced support for research under the rural affairs environment and climate change portfolio. We argue that continued support of Scotland’s science and research base is vital to meet the Scottish Government’s purpose of increasing sustainable economic growth. We set out evidence to demonstrate that JHI research continues to provide economic, environmental and social benefits for Scotland, and is an essential vehicle for a prosperous Scotland into the future.

Examples of economic benefit from research at the JHI

- Independent research shows that for every £1 of Scottish Government funding going to JHI, £17 is generated in the UK economy (report by the independent economists, DTZ, 2010)
- Whisky is Scotland’s biggest export. The success of whisky is built on product integrity, the quality of raw materials used and the maturation process. Barley is a key ingredient. Research by the JHI is focused towards promoting the quality and value of barley in the whisky producing process. Barley research carried out at JHI increases the quality of whisky and reduces waste. The benefits of this research are estimated at £27.9 million per annum based on cost efficiencies in the whisky industry associated with avoidance of waste.
- The Scottish Government is moving towards a Hydronation. A hydro nation manages its water to drive its economy, improve its society, protect its environment and contribute to its international obligations. The recently established Centre of Expertise on Waters, led by the JHI is a central building block to a Hydronation, offering research and advice to ensure that Scotland’s water policy is world leading into the future.
- JHI scientists interact with policymakers and land managers to provide impartial evidence to feed into Scottish policy development. An example is our considerable involvement in the recent Pack Inquiry which made recommendations to the Scottish Government on how financial support to agriculture and rural development can best be tailored to deliver sustainable economic growth.

Examples of environmental benefit from research at the JHI

- JHI breeds organic varieties of potato, soft fruit and veg. Organic varieties have no use of chemical fertilisers and pesticides. This is among the top priorities for the Food Standards Agency
and SEPA, and development of such varieties contributes to meeting regulatory targets from the EU Water Framework Directive and the Soil Quality Directive.

- The International Convention on Biodiversity challenges signatories to adopt new measures to stem the decline in biodiversity by 2020. Scientists at JHI are contributing to policy development in this area by engaging with people using the land to develop, implement and monitor new approaches to the management of biodiversity and ecosystems within production landscapes. We are working with policy makers to develop tools to assess the consequences of different policy instruments on biodiversity and ecosystems services, thereby helping Scotland meet international obligations.

- Protecting and improving the health of soil for different purposes is a major way to increase food security and fibre production; to protect water supplies; to mitigate climate change; and to make our ecosystems more resilient to environmental change. The JHI is world renowned for its soil science. We house the National Soils Archive in Aberdeen that contains more than 43,000 air-dried soil samples collected from 13,000 locations around Scotland.

- Scientists at the JHI are playing a key role in the UK National Ecosystem Assessment, which analyses the value of the UK’s natural environment by taking account of the economic, health and social benefits we get from nature. It is the first assessment of its kind at a UK scale. This research provides data upon which policy such as the Land Use Strategy, Scottish Rural Development Programme and River Basin Management Planning can be based.

- Scotland has shown leadership in the Climate Change (Scotland) Act 2009 in setting ambitious greenhouse gas emission reduction targets. JHI scientists continue work in this area examining climate change impacts, mitigation and adaptation in the rural and land use sectors both nationally and globally. Research from our biophysical, social and economic scientists is used to provide the evidence base for effective policy-making in this area.

- A Times Higher Education survey recently ranked the Institute as being the second most influential Scottish institution in the category of environmental and ecological sciences, and ranked in the top 20 UK institutions.

Examples of social benefit from research at the JHI

- An international team of scientists – led in the UK by researchers at The James Hutton Institute in Scotland – have succeeded in mapping the genome of the potato. The achievement will help in speeding up the traditionally time-consuming process of developing new potato varieties. New types of potato could help to ensure future food security both in Scotland and overseas because of improved yield, quality, nutritional value, and resistance to pests and diseases.

- JHIs Land Capability for Agriculture (LCA) classification is the official agricultural classification system widely used in Scotland by the Government and its agencies, agriculturalists, planners, estate agents and others as a basis of land valuation and a tool in rural development plans.

- Crop varieties are bred at the JHI to enhanced health and nutritional quality. For example Lady Balfour potatoes is bred for high levels of polyphenols (antioxidants). This research contributes to ongoing challenges around the health and wellbeing of the Scottish people.

- Scotland’s knowledge economy is world leading. The JHI is a key component of this knowledge economy. A report compiled in 2009 confirms that Scotland’s research is cited by other researchers around the world more often than any other country, in comparison to its Gross Domestic Product (GDP).

- Rural development research at the JHI provides a basis for new policy and legislation. For example, a report by the Institute for the Committee of Inquiry on Crofting, provided evidence to inform the recent Crofting Reform Bill.

The James Hutton Institute was formed, with encouragement from the Scottish Government, to bring together a wide range of scientific disciplines in soils, land use, water, genetics, crop breeding and plant pathology. It is of a scale that makes it strongly competitive in the UK and Europe. Already the inter-disciplinary interactions of our scientists are producing new, and exciting lines of research. The Board of Directors and senior management team believe the newly created Institute is fit for purpose in the current, global economic environment. With support from the Scottish Government, the food, drink and land-based industries, and by forging new partnerships at home and abroad, we submit that the James Hutton Institute will be a successful agent for sustainable economic growth in Scotland.