

Open Letter to

Owen Paterson , Secretary of State for the Environment , Food and Rural Affairs  
Professor Duncan Kell , Chief Executive BBSRC  
Professor Duncan Wingham, Chief Executive NERC

### **Priorities for Agricultural Research**

We the undersigned attended a discussion on Research and Development Priorities for Agriculture at the Oxford Real Farming Conference on 3<sup>rd</sup> January 2013. Below we set out the conclusions of our discussions and we are writing to you to request that you incorporate these in future funding rounds and invitations for research tenders. As you will see, our list extends well beyond the normal scope of traditional science based research because we recognise that socio economic issues are equally important in developing an environmentally and economically sustainable rural economy and farming system.

We recognise that plant breeding and genetics will not provide all the solutions for the long term sustainable management of agroecosystems to ensure that they in the best possible condition to provide the multiple benefits the planet needs. We strongly believe that UK funding bodies should adopt a systems approach to tackling all problems in the future and to focus on sufficiency rather than productivity. Why aim to produce 20 tonnes of wheat per hectare when much of it is wastefully fed to animals in intensive units where effluent is a major management problem when less would be needed if more of it were fed directly to people?

By concentrating on addressing the question how many people we can feed per hectare rather than how much can we produce per hectare many more avenues of research and solutions would open up including a more sustainable and healthy diet, extensive production of meat and dairy products based on grass-fed systems and the generation of jobs through a more localised food system. The IAASTD report of 2008 recognised that current farming practices were taking our planet beyond several planetary limits (for example, freshwater pollution, water use, nutrient pollution, biodiversity losses and greenhouse gases) and that the current models of intensive production had to change to be based on an agroecological approach alongside major socio-economic, political and trade reforms.

Our priorities for the UK's R&D reflect these findings and we regret the significant delay in the implementing them after the UK fully endorsed the final IAASTD report across five government departments. We also recognise the knowledge and skill of farmers and regret that they are not more integrated into the setting of R&D priorities and field research. The current research priorities focus far too much on patentable technologies and not knowledge based solutions which can be widely implemented across all types of production. We recognise that the research priorities of companies looking to exploit patents may not necessarily be the same of those needed to deliver long-term sustainability.

Overall we believe that agricultural R&D has become far too specialised and divorced from the real needs of farmers. Specialists need to work with generalists so their research can be fully integrated into a systems approach to problem solving if it is appropriate.

### **Agriculture and Food System Research and Development Priorities**

- Soil ecology and the management of soils as an ecosystem to ensure that they are: rich in all plant nutrients ; are highly biodiverse; of stable structure to maximise water absorption and

water holding capacity and to reduce run-off and erosion; and are rich in organic matter and humus to maximise their carbon storage capacity. Currently R&D funding is disproportionately focussed on above ground technologies and approaches and this fails to recognise the essential requirement to restore soils to full health as quickly as possible. For example, we need to develop rotations which are fertility building and which minimise risk of major pest and disease outbreaks.

- Closing nutrient cycles by maximising the recycling of organic wastes and manures.
- Reducing dependency on animals feed imports to increase sustainability and greatly reduce the socio-economic and political risks arising from imported soya and maize.
- Developing healthy diets linked to sustainable soil management and the highest levels of animal welfare.
- Supporting conventional plant breeding in particular the development of late blight resistance in potatoes (eg as being undertaken by the Sárvari Research Trust at present with no government support)
- Supporting the development of perennial crops which may be more resilient in the face of climate uncertainty.
- Supporting the development of polyculture and permaculture systems to build resilient agroecosystems.
- Supporting pasture ecology in relation to parasite control to reduce dependency on chemical interventions.
- Supporting the integration of fruit and vegetable production into farming systems

Finally, we recommend that you examine the following areas which we feel would greatly improve the value of the UK's R&D expenditure for taxpayers and enable farmers to manage their land more holistically:

- The establishment of a technology platform for organic farming and agroecology through the European Union Innovation partnership as a means to increase budgets for research and development.
- The economic benefits accruing from a more localised food system.
- The integration of renewable energy into the farming system.
- Examining rural planning to ensure that the work force and products can be quickly and efficiently delivered to where they are required
- Farmer involvement in setting priorities and planning research projects.
- Massive improvement in the dissemination of research results and their practical implementation at farm level including the use of modern communications , farmer to farmer training and other devolved approaches to extension services.
- Examining the lessons to be learnt from approaches in other EU member states and farmer led research in the Global South.
- A significant investment in public education and information to re-connect people with their sources of food and foster an understanding of the wider benefits to be gained for a more sustainable approach to agriculture.

In addition we find widespread agreement across all of farming that the decision to remove the free extension service provided by ADAS was a major mistake and should be reversed so that the much needed training in the knowledge and systems based approach to agricultural development can be impartially delivered at farm level .

We look forward to receiving your reply.

Yours sincerely