A COORDINATED AGENDA FOR MARINE, ENVIRONMENT AND RURAL AFFAIRS SCIENCE (CAMERAS) (2011-2016)

Quality Meat Scotland
The Rural Centre
Ingliston
Newbridge
Midlothian
EH28 8NZ

Introduction

Quality Meat Scotland is pleased to respond to the above consultation since our core function is to work with the Scottish red meat industry to improve its efficiency and profitability and to maximise its contribution to Scotland's economy.

Scientific research and development and technology transfer are not only core activities of Quality Meat Scotland but they are also central to the performance of Scottish livestock industries. In a highly challenging global environment, innovation and efficiency of operation will be crucial determinants of competitiveness and economic growth. Both are underpinned by the application of relevant knowledge-based technology.

General Comments

Although there are some aspects of CAMERAS which are good and which we support, generally the consultation raises a number of major concerns. Overall, we find the document lacking in both focus and innovation. We are very doubtful that the proposed Coordinated Agenda will make either a significant or timely contribution towards meeting the stated single purpose of Scottish Government which is ‘To focus Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth’.

Whilst we recognise the need for research to underpin regulatory, surveillance and monitoring requirements, the aim of CAMERAS to ‘support new policy formulation’ does not match the stated vision for science to be ‘in support of Scotland’s sustainable economic growth’.

The focus on providing support for policy formulation rather than on the delivery of knowledge to create and support sustainable economic growth for industry and business in Scotland is very disappointing and a missed opportunity. It is well recognised that economic growth is stimulated by the uptake of Research and Development in industry and business. If the Scottish Government is to meet its purpose of increasing sustainable economic growth, it is crucial that the research

activities are focused on meeting the needs for growth in Scottish businesses and industries. Indeed the current economic downturn is a compelling driver for better coordinated research funding and stronger science business links that has been recognised at EU level.

However, we very much welcome and are fully supportive of the proposal for greater integration and co-ordination of the work of the Marine, Environment and Rural Affairs agencies and the Main Research Providers with additional support from the University sector, to provide a stronger knowledge base for Scotland. In addition, we would suggest that considerable additional benefits could be gained from the broader inclusion of the FE colleges network.

If the Scottish Government is to meet its five key objectives of making Scotland Wealthier and Fairer, Healthier, Safer and Stronger and Greener, and if the policy is to address the economic growth of 7 key sectors identified in the consultation, then the Coordinated Agenda must be focused on and responsive to the needs of and knowledge gaps in those sectors, rather than being driven by scientists and policy makers.

Consultation questions

Headline Themes

1. Do you agree that the two broad categories of "Local Responses to Global Change" and "Optimising the Potential of Scotland's Natural Assets" are helpful in providing an overlying structure to the Co-ordinated Agenda?

No, the categories are rather poorly defined and the distinction between the two is uncertain and unclear. For example, what is meant by local – Scotland as a whole, Local Authority regions, towns, villages etc..? It is not clear how building an evidence base is going to increase economic growth. Surely the key here is to use our science base to provide innovation-driven opportunities for businesses to grow in a way that is consistent with environmental protection and adaptation to the inevitable global changes. This in itself will involve using, developing and optimising all Scotland's Natural Assets in terms of people, economics, environmental etc.

2. Are the descriptions of these set out in Section 3 (and Annex 3) comprehensive?

No, as above and as outlined under general comments. The whole approach lacks clarity and has a rather unambitious overtone. The descriptions would benefit from some focused goals, and some clear identification of the gaps in our

knowledge and how key innovations could support the economic growth of businesses and Scotland as a whole. We would prefer that Section 3 gave a greater sense of forward drive. The section as presented gives the sense that the main aim is to use our science base to maintain and protect the current position. We already have a large body of knowledge and expertise, the major challenge is to translate that knowledge into practice. We believe that there are excellent opportunities to use our expertise and knowledge resources to drive forward an innovation based agenda to solve the problems.

3. Do these cover the major policy challenges where science can contribute as you see them?

No, we see the major challenges as being those associated with achieving sustainable economic growth and meeting the Scottish Government's five strategic objectives. We believe that a major policy challenge is required to ensure the transfer of knowledge and expertise into practice to achieve economic growth.

4. Are they likely to remain broadly relevant over the longer time horizon (well beyond the 2016 focus of this Coordinated Agenda)?

Probably not, because the current relevance of proposed themes is not clear.

5. Do you agree with the description of support for the National Capability Theme set out in Section 3 (and Annex 3)?

We are supportive of the National Capability Theme and feel that it is particularly important that this scheme encompasses provision for living collections, databases and reference collections, and that these are matched by funding to ensure appropriate critical mass of academic expertise to use and maintain them. The central funding of broad based end-user focused research linked to University funded fundamental research provides an important flexible knowledge base which allows the appropriate drawing together of expertise to meet unexpected or emergency demands.

6. What facilities, resources and data do you think are important for Scotland to maintain?

We believe it is crucial that Scotland maintains large centres for Animal Science and Animal Disease and that both these centres retain a strong industry focus. It is important that all aspects of these centres are supported and developed, particularly those which deliver innovation and are used by industry. It is important that the work of these centres remains industry focused to continue to provide the means by which industries and businesses can meet the Scottish Government's purpose of sustainable economic growth.

In addition, these centres are not only essential for Scotland but are also important in a wider, global context as centres of excellence which enhance Scotland's knowledge base and our wider reputation in these areas of science.
It is also important to support flocks or herds of animals which are important to Scotland for biodiversity or genetic recording purposes, or groups of animals for whom large long term data collection has been undertaken.
There is also a need to maintain and develop (see 7) facilities, resources and expertise in food manufacturing and processing as well as supporting the facilities which provide skills training.

7. Are there other resources that Scotland needs to acquire to support future policy development?

Yes, there is a need for Scotland to set up a centrally located centre for food processing and manufacturing with a development kitchen and taste panel. Knowledge exists as to the basis of a healthy diet but a major block in the uptake of the knowledge is the challenge for industry to reformulate or develop new products which meet the needs for health.

Policy Issues

8. Have we correctly identified the key policy issues and the associated scientific opportunities in Section 3?

No because the focus is not on sustainable economic growth.

9. Are there additional issues that should be included?

Sustainable economic growth must be the primary focus and driver for the Coordinated Agenda, and this should be reflected in the remit and vision of all the MRPs and Marine, Environment and Rural Affairs agencies.

10. What do you think will be the most important influences on Scotland's future in the Marine, Environment, Rural Affairs and related areas?

The most important influences on Scotland's future in the Marine, Environment and Rural Affairs and related areas will be the economic situation of the businesses which work in these areas. Scotland has excellent resources in terms of livestock based food production but this is under threat due to economic pressures. Continued pressures could lead to a loss of critical mass and the loss of a viable livestock industry with penalties for food supply, tourism, rural communities and the national economy.
We believe that the challenge is to use Scotland's science base to support these businesses and help them to achieve sustainable economic growth. In terms of the livestock and red meat industries it is very clear, that there are major opportunities to gain from our scientific knowledge and expertise in livestock

genetics, production, health/disease, product quality, processing, health, waste and energy to benefit the sustainable growth of businesses in the whole holistic food chain.

11. Why do you think these are important?

They are important because the viability of businesses underpins sustainable economic growth.

12. Are there other scientific opportunities which should be highlighted?

Scotland has excellence in a range of scientific disciplines, with a well deserved reputation particularly in the animal, marine and land-based sciences and engineering. It is important however that Scotland focuses its resources to strengthen areas of excellence and does not try to compete in areas where it has little critical mass. It is also important that public funds should be used to support science which has a clear business or industry applicability and that important fundamental science is largely funded through the research councils.
A major opportunity, and one which we support in the consultation, is for the greater collaboration and integration of the MRPs and Marine, Environment and Rural Affairs agencies. The benefits that greater co-ordination and integration can bring to strengthen Scottish science are considerable, especially if the outlook remains on supporting sustainable economic growth.

The Science

13. What existing areas of Scottish based scientific expertise should be maintained to contribute evidence to key policy issues?

The primary areas that must be maintained and supported to provide evidence for key policy issues are animal science and animal disease focused research because Scotland now has the leading expertise in both these areas in the UK. Loss of expertise or dilution in the focus of either of these would have, not only an major impact in Scotland, but would have UK wide impact as well.

In addition, it is important that the marine and land based scientific expertise is maintained and supported because Scotland again leads in both these areas in the UK.

As the climate changes and to achieve sustainable economic growth, it is essential that the animal and land based industries are supported and developed in a holistic and integrated manner to provide the knowledge base for businesses.

14. How clear is the relationship between the scientific areas and the key policy issues?

This is the main problem with the consultation document. The relationship between the scientific areas and the key policy issue of sustainable economic growth is not strong.

15. In which areas of science can we continue to make use of expertise supported elsewhere e.g. at the UK, EU and international levels?

There remains a much reduced level of expertise in animal science and animal disease in the UK, indeed Scotland leads the UK in both areas, but a number of UK collaborations are ongoing. At the EU level there is evidence of ongoing efforts to gain funding – with variable success- and there are strong collaborative links across the EU (Germany, Spain, France, Norway etc). Beyond the EU there are good collaborative opportunities with New Zealand and Australia, and North America – with some ongoing programmes.

16. In the time frame for CAMERAS (2011-2016) what new emerging areas of science are likely to mature and become available for more general use or application?

The major growth area will be biotechnology and animal related biosciences; human sciences proceed more slowly because of regulation and uptake issues.
The most likely areas to be in general use will relate to animal genetics, disease diagnosis/prevention, and data acquisition/handling and transfer technologies. There will also be developments in animal nutrition to reduce climate impacts and the waste management technologies will have changed and be in more general use.

Key emerging areas will be in the assessment of product quality and innovations in product processing, where if the end-user focus is maintained, Scotland could be at the forefront of innovative developments in emerging technology.

There is also likely to be considerable advances in renewable energy and the integration of renewable energy supplies into the conventional grid system.

17. Do we have the expertise available to be able to use these new opportunities?

There has been some loss of expertise over the years, particularly in animal science and product quality. It will be essential to support these areas through continued public funding and through clear focus and coordination.

18. In which areas does Scotland need to be self reliant?

In general science is globalised, and wide ranging collaboration is important for the maintenance of innovation and stimulation. However, where there are resources such as genetic resources, landscapes, or social circumstances that

are unique to Scotland, or a need for facilities that cannot be provided through collaboration there may be a need for self reliance.

Delivery

19. Knowledge Exchange is essential for scientific activity to achieve impact. Do you agree that KE should be an explicit and integral aspect of the delivery of this Coordinated Agenda?

Yes, and exchange is a key word. There must be a flow of knowledge between the science base, the policy makers and the business/industry end-user if the objective of sustainable economic growth is to be achieved.

20. How can we continue to improve the integration of evidence from a diverse range of sources into forms that are accessible to end-users?

This is a major challenge. Communication underpins the whole success or failure of science policy to drive economic growth. Scientists are often not good at communicating in a manner accessible to end-users and although the use of technology translators has proved successful in some circumstances, there tends to be variable levels of delivery. Evidence could be better integrated and delivered through the provision of an overall coordinator of technology dissemination.

In addition, as part of a scientist's career, a period working within the business or industry to which their science relates could provide not only important insights as to the needs of the end-user, but could also be crucial to improving knowledge exchange.

21. How can we reconcile the requirement for science to be responsive and flexible to short term demands while at the same time ensuring that longer term strategic research continues to progress our knowledge and understanding?

There are two issues here. One structural which depends on having a network of diverse research providers and agencies which include the universities, FE colleges and industry bodies so that there is capacity to form and disband responsive teams when needed. The second is financial. It is important that key individuals are fully funded and not dependant on 'soft' funding. This allows sufficient flexibility at a senior level to provide a response mode science base. Insufficient funding making these key individuals reliant on external funds means that they are contractually less flexible and less able to respond.

22. How can we ensure that the 2 way flow of knowledge from science to policy and from policy to the academic community is optimised?

This question again highlights the major problem with the consultation. If sustainable economic growth is to be achieved then it is essential that the flow of information includes the industry and businesses who will achieve the economic growth.

23. Are there alternative structures/systems or new approaches/organisations that could enhance these flows?

Yes, see 20. A co-ordinator of technology transfer could provide an important innovation in this respect. That individual together with groups of industry and business representatives could provide a means of not only helping to ensure the end-user relevance of the work but could also act as ambassadors for disseminating the information within their own sector.

24. Are there science delivery models which could provide examples of good practice for Scotland to follow?

The most successful models depend on the messages being delivered being timely and of interest and value to the recipient. It is also important that the messenger has credibility within recipients' community group. A good example of delivery is provided by the work of the Scottish Agricultural College in their KE activities and where the individuals delivering the messages are not only aware of the needs of the recipients but are also knowledgeable of the wider industry and policy issues.

General Comments

25. We would also welcome any other general comments you may have on any of the issues raised in this document.

We have not further comments.