Poultry Research Capacity Workshop
AAFC Research Direction

November 24, 2015 – Toronto
Establishing a Strategic Direction

- During 2013 and 2014, Science and Technology Branch conducted a strategic planning process to shape the future direction of the Branch based on:
  - AAFC’s role along the innovation continuum in providing research (R) resulting in knowledge acquisition, developing or applying that knowledge (D), together with concerted efforts to transfer (T) this knowledge and technology or practices to stakeholders;
  - the existing science capacity within AAFC and other levels of government, academia, the private sector and other organizations across Canada that could be mobilized to support the agriculture, agri-food and agri-based products sector;
  - a greater focus in AAFC science activities on departmental priorities;
  - increased direct support for industry leadership in science and innovation provided by the Growing Forward 2 agricultural policy framework; and,
  - enhanced interaction with industry through science clusters and other collaborations and partnerships.
• Our work is guided by **four strategic objectives** that address the major scientific challenges facing today’s production systems:

  – **Increasing agricultural productivity** - at both an individual commodity level and from a systems perspective, such as crop rotations, and livestock and forage systems;

  – **Enhancing environmental performance** - for example, improved nutrient utilization and recycling and mitigating greenhouse gas emissions;

  – **Improving attributes for food and non-food uses** – such as nutritional attributes, use of crops and livestock in pharmaceuticals, bio-chemicals, industrial fibre and bioenergy; and

  – **Addressing threats to the agriculture and agri-food value chain** – such as catastrophic risks associated with weeds, insects and disease; and risks to food safety.
Strategic planning

We’ve described how we’ll meet those objectives in nine strategies

- 7 sector-based strategies
  - Dairy, Pork, Poultry and Other Livestock
  - Forages and Beef
  - Cereal and Pulse
  - Oilseeds
  - Horticulture
  - Bioproducts
  - Agri-Food

- 2 cross-cutting strategies
  - Agro-Ecosystem Productivity and Health
  - Biodiversity and Bioresources
SCIENCE STRATEGIES
AAFC Science and Technology Branch

Dairy, Pork, Poultry and Other Livestock Sector
Sector Overview, Challenges, Opportunities

• General context
  • Rising global demand for food and energy, increasing consumption of animal proteins
  • Growing importance of trade, product attributes
    • New trade agreements
  • Impact of climate change and importance of environmental issues
  • Increasing input costs and price volatility on international markets

• Challenges
  – Feed costs, antimicrobial resistance and public health concerns, environmental impacts
  – Genetic diversity

• Opportunities
  – Supply-managed commodity – but potential for product differentiation
The Canadian poultry sector has high animal health and food safety standards, supporting one of the safest poultry value chains in the world.

- **Strong research capacity** is present across the country in universities and the private sector. There is also a network of international poultry initiatives, related to research (e.g. World Poultry Science Association), trade and advocacy (e.g. International Poultry Council) that facilitates contacts among stakeholders in different countries. The value chain is also well organized and coordinated, and supply management provides stability to producers and processors.

- **Weakness:** However, input costs are high in Canada compared to competitor countries (e.g. US), and the industry is highly dependent on chick suppliers. The conservation of genetic resources to ensure diversity in different breeds and species is crucial for the long-term survival of the industries. There is also a lack of research in poultry genomics, and a certain gap in research related to environmental impacts of production.

- **Opportunities for the poultry sector** relate to the growing demand for animal proteins worldwide.

- **Threats** to the sector relate to the pressures on the supply management system, arising from international and regional trade negotiations, that could expose producers to more intense competition. The use of antibiotics in poultry production is associated with the development of antimicrobial resistance, which causes public health concerns related to antimicrobial-resistant food-borne infections.
AAFC Priorities in Poultry Research

AAFC has limited capacity in poultry research: most of the capacity is concentrated in the area of food safety and gut health, including the development of alternatives to antibiotics, methods for, and conservation of, avian genetic resources, and environmental impacts of production.

For our Four Strategic Objectives

• **Increasing agricultural productivity**
  • Conservation of genetic resources (techniques, breeds, traits);

• **Improving environmental performance**
  • At the production system level, reduce greenhouse gas and ammonia emissions and improve nutrient management and the efficiency of natural resource use;

• **Improving attributes for food and non-food uses**
  •

• **Addressing threats to the agriculture and agri-food value chain**
  • Improve gut health, reduce antibiotic use and develop alternatives to antibiotics;
  • Reduce risks from manure pathogens and other compounds
Next strategic framework

AAFC’s plan will be based on lessons learned from previous frameworks

As a principle: Keep what works, tweak what doesn’t, and expand to address new federal priorities

• The core policy objectives of **Innovation, Competitiveness, and Resilience** have remained consistent though the framework model has evolved;

• New relevant policy areas reflected:
  - Invest in an Agri-Food Value Added Investment Fund to attract investment and create good jobs in food processing;
  - Invest in agricultural research to support discovery science and innovation in the sector;
  - Work with provinces, territories, and other willing partners, to help the sector adjust to climate change and better address water and soil conservation and development issues;
  - Support the Ministers of Natural Resources and the Environment and Climate Change in making investments that will make our resource sectors world leaders in the use and development of clean and sustainable technology and processes.
Thank you
You could find more information on our web site http://www.agr.gc.ca
Annexe
Research Centres by Region

Coastal
- Agassiz
  - Lacombe
  - Swift Current
  - Lethbridge

Prairies
- Saskatoon
  - Brandon

Ontario/Québec
- Québec
  - St-Hyacinthe
  - St-Jean-sur-Richelieu
  - Ottawa
  - Guelph
  - London
  - Harrow
  - Kentville
  - Fredericton
  - Charlottetown
  - Sherbrooke

Coastal
- Summerland

Prairies
- Swift Current