

CPRC Update: Smart Agriculture Initiative

Smart Agriculture and the Poultry Sector

Smart Agriculture is one of several terms used to refer to an expansion of what has been called precision agriculture. Some precision agriculture tools have been adopted by poultry producers, particularly as they relate to the in-barn environment and monitoring barn conditions. Smart Agriculture has been defined as the combination of Precision Agriculture with Big Data to provide livestock producers with on-line, continuous and automatic monitoring of animals and their environment to support optimal management. Smart Agriculture uses a broad range of components – big data, robotics, drones, sensors, etc. – that have to be harmonized to provide real-time measurement or estimation for immediate reaction to data/information by farm managers. Livestock processing and input sectors are also adopting smart management features in their businesses.

The poultry sector has been slower than other livestock industries, such as dairy and swine, to adopt this new-generation management tool. Part of this delay in taking advantage of smart management tools is because very little research and innovation needed to develop poultry sector-specific technologies has been conducted in Canada. Also poultry producers may not fully recognize how these tools apply to their sector to generate higher efficiency and productivity. Application of smart agriculture tools to a cow or sow is easier to understand than how they might apply to a chicken or turkey. It is easier to apply monitoring and decision-making systems to large animals that have significant value and that can be fitted with individual monitoring devices.

However, we do have examples of research on smart agriculture applications for poultry being conducted at Canadian universities. Dr. Martin Zuidhof of University of Alberta is developing a precision feeder system for broiler breeders to ensure more consistency in bird condition when egg laying begins in order to improve flock production. Dr. Suresh Neethirajan, University of Guelph, is developing rapid diagnostic tools for use at the point of care, such as within the poultry barn, to identify disease outbreaks without the delay required for laboratory analysis. CPRC recently added precision/smart agriculture tools to its list of categories for its annual call for Letters of Intent (LOI) and is investigating methods to identify potential industry issues that might be addressed using this comprehensive approach to management information and decision-making systems.

CPRC 2017 Board of Directors

CPRC's full board returned for 2017 and has been busy working on the 2017 call for LOIs, preparation for the expected AAFC call for proposals for a new Science Cluster program under the 2018 to 2023 Agricultural Policy Framework and issues that arise from the ongoing administration of the 38 active research projects. CPRC is grateful to its member organizations for their continued support of CPRC operations and their appointees to the Board of Directors. Board members include Tim Keet, Chair and Chicken Farmers of Canada representative, Helen Anne Hudson, Vice-Chair and Egg Farmers of Canada representative, Erica Charlton

representing Canadian Poultry and Egg Processors Council and the third member of CPRC's Executive Committee, Murray Klassen representing Canadian Hatching Egg Producers and Brian Ricker who represents Turkey Farmers of Canada. CPRC also appreciates the ongoing support and input from the staff appointed by the member organizations to support their representatives on the Board of Directors.

CPRC, its Board of Directors and member organizations are committed to supporting and enhancing Canada's poultry sector through research and related activities. For more details on these or any other CPRC activities, please contact The Canadian Poultry Research Council, 350 Sparks Street, Suite 1007, Ottawa, Ontario, K1R 7S8, phone: (613) 566-5916, fax: (613) 241-5999, email: info@cp-rc.ca, or visit us at www.cp-rc.ca.

The membership of the CPRC consists of Chicken Farmers of Canada, Canadian Hatching Egg Producers, Turkey Farmers of Canada, Egg Farmers of Canada and the Canadian Poultry and Egg Processors' Council. CPRC's mission is to address its members' needs through dynamic leadership in the creation and implementation of programs for poultry research in Canada, which may also include societal concerns.