

# POLICIES & REGULATIONS FOR A THRIVING CANADIAN AGRI-FOOD SYSTEM

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## Poster 22

### **A NEW APPROACH TO MODEL INNOVATION THROUGH NEW PRODUCT CHARACTERISTICS**

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This study develops a theoretical model that explains the incentives to create new characteristics for new production inputs. For example, crop breeders develop improved varieties of seed with new traits and characteristics to better suit farmer needs. While, traditional economic location models are not very helpful in analysis of more than two characteristics, this model incorporates the sequential entry of n characteristics with horizontal and vertical product improvement.

This novel approach explains product cycles with both number of products and prices as a function of the rate of quality improvement. The resulting dynamic equilibrium path is consistent with “neighbourhood of equilibrium” introduced by Schumpeter (1939) and the results of the numerical simulations provide a better understanding of the “irregularly regular” nature of product cycles.