Priority Project Areas	Strategic Outcomes	Investment Priority for Research
Priority Project Area 1: **Optimize Production Practices**	1.1 Best practices and the use of automation optimizes the production practices of Canadian growers; and 1.2 A reduced need on farm inputs.	• Conduct research in the automation of production as a means to reduce labour costs; • Conduct research in order to reduce farm inputs (for instance fertilizer) without impacting yields; • Develop best practices to mitigate climate change effects and extreme weather events.
Priority Project Area 2: **Improve Pest and Disease Management Practices**	2.1 The sector employs effective integrated pest management methods widely; 2.2 Growers have access to knowledge regarding the emergence and prevalence of pests; 2.3 Growers have effective and cost-effective methods for detecting and monitoring pests; 2.4 Growers have thresholds for action for the control and management of pests as they relate to various crop development stages.	• Develop, understand and disseminate effective and safe integrated pest management methods that conciliate crop protection, economic profitability, environmental protection, public health, quality and safety of vegetables. • Improve and disseminate knowledge about new and existing pests • Develop and transfer tools and methods for detecting and monitoring crop pests • Determining genetic basis of disease resistance in breeding program germplasm, and understand the relationship of resistance/susceptibility between growth stages (i.e. spear and fern in asparagus); • Develop or modify action thresholds for pests as relating to crop development stage (i.e. number of scouted cabbage maggots per broccoli plant); • Priority pests including: wireworm, swedge midge, cabbage maggot, seedcorn maggot, bacterial diseases, sclerotinia white mold, carrot forking and neck rot in onion.
Priority Project Area 3: **Optimize Post-Harvest and Storage Practices**	3.1 Growers use optimized storage methods and technologies that minimize losses and maximize produce quality; 3.2 Growers employ strategies and approaches that minimizes water usage.	• Conduct research in storage techniques to minimize losses and improve efficiency; • Research conditions required to improve storability of produce; • Research on wash water use on vegetable farms.
Priority Project Area 4: **Plant Breeding, Variety Development and Evaluation**	4.2 Ongoing variety research is carried out that improves post-harvest shelf life and quality, adapt to new climatic conditions and increase resistance to bacteria and diseases; 4.3 Growers benefit from national coordination of variety evaluation.	• Conduct work on genetic breeding and selection to improve post-harvest shelf life and quality, to adapt to new climatic conditions, to increase resistance to bacteria and diseases (including physiological disorders) and to develop early and late varieties; • Conduct variety evaluation on vegetable crops; • Develop high yielding, high quality, disease and replant resistant asparagus cultivars; identify the physiological basis of longevity in asparagus and assess genetic architecture for the trait; and conduct field testing of potential new asparagus varieties.

Priority Project Area 5: **Research on the Health Benefits of Vegetables**	5.1 Ongoing research is conducted on the benefit of vegetable consumption.	• Recruitment of new researchers, supporting students and universities • Support and validate peer review for health research proposals

Enabling Strategy: Knowledge Collection, Translation and Transfer	National collaboration with growers, universities and government researchers has resulted in • Coordination of research; • Translation of results; • Transfer of knowledge and technologies for grower use; and • High adoption rates by industry.	• Training programs • KT Coordinator • Communications and dissemination strategies