FIGURE 1: A summary of potential climate change effects on food production in Canada. 1) Crop productivity depends strongly and directly on seasonal weather for heat, light and water. Locations for particular crops will also change. 2) Pollinators would face shorter, less harsh winters but may be affected by increased pest and disease activity, different food sources and changes in the timing of flowering. 3) Animal production will be affected by changes in crop production, water availability and heating and cooling requirements. 4) Changes in water supply and precipitation patterns will affect farm operations (e.g. need for drainage or irrigation). Water quality will also be affected (e.g. increased flushing of contaminants into waterways due to heavy rainfall). 5) Food processing may be challenged by reduced or variable water availability. Food and feed storage will need to deal with increased heat, and in some places, increased storage capacity may be required to allow for increased frequency and duration of transportation interruptions. 6) Fish stocks will respond to changes in water temperatures, water chemistry, food supply, algal blooms, runoff and ocean currents. Reorganizations of lake/ocean ecosystems are likely, with resultant impacts on all types of fisheries. 7) Pests, diseases and invasive species could become more virulent and diverse. 8) Northern/remote communities may be able to increase local food production with adaptation (e.g. greenhouses, cold-tolerant field crops and forages). Access to country foods will be affected as vegetation is directly impacted by changing climate, and species distributions will shift in response to warming. Decreased ocean ice could increase the length of the shipping season, allowing more items to be brought to northern coastal ports. 9) International trade will be affected by the change in the global geography of food production with countries shipping new types of goods as well as by the potential opening of the Northwest Passage.