

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Life Support, habitats and EVA Systems (7)

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CANADIAN SPACE AGENCY'S FOOD PRODUCTION INITIATIVE – FOOD PRODUCTION FOR
SPACE AND EARTH

Abstract

Canada's 2019 Space Strategy includes an element of harnessing space to solve everyday challenges here on Earth. One area of emphasis is enhancing access to nutritious food across Canada, including the North, with the aim of, one day, taking these lessons learned to help astronauts grow food off Earth. To advance this aim, the Canadian Space Agency has initiated a new food production initiative. This initiative commenced with the development of a Canadian Space Agency food production strategy. The strategy focuses on positioning Canada to have crucial food production capabilities for long-duration human space-flight and by the mid-2030s permit Canada to contribute such crucial systems to an international partner lunar food system. The Canadian Space Agency has begun consulting with its national food production community and with its international partners. This has included the completion of a "food production for space" strategic analysis study and formalizing the Canadian Space Agency's participation in the Naurvik ("growing place") initiative, which involves the design and testing of a green energy-powered controlled environment production unit for growing plants in Canada's North. The Naurvik initiative is being conducted in collaboration with Agriculture and Agri-Food Canada, the National Research Council of Canada and the non-profit Arctic Research Foundation. Results of these recent activities as well as an overview of the Canadian Space Agency's food production initiative and upcoming activities will be presented.