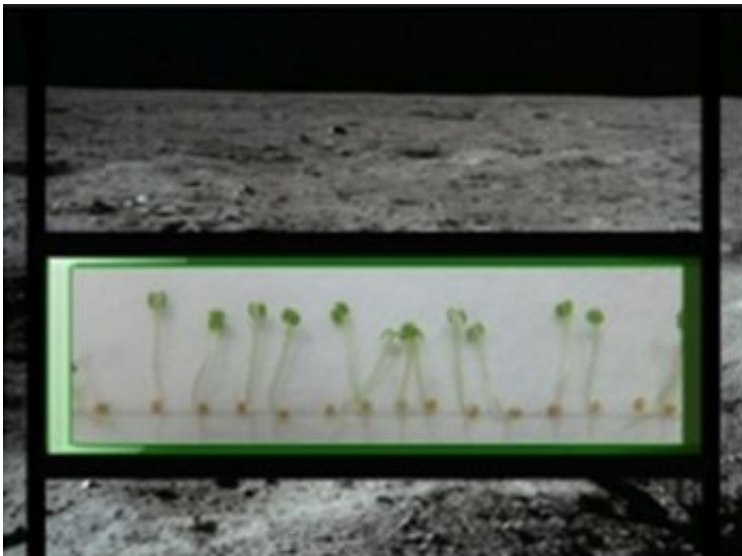


Peas, other edibles grow in experimental space greenhouse

February 3 2014, by Nancy Owano



Credit: NASA

(Phys.org) —Russian cosmonauts on the International Space Station have grown a crop of peas, wheat, and Japanese leafy greens in the ISS greenhouse. The report comes from a researcher with the Russian Academy of Sciences Institute of Biomedical Problems, which is partnered with Utah State University's Space Dynamics Laboratory. The food was [confirmed](#) as safely edible. Their root modules were analyzed to confirm their safety. The team's success in growing the crops bring hope among space exploration teams that a supply of fresh food might be feasible, in contrast to reliance on food specially packaged to stay

edible for long periods. The delivered foods can deliver nutrition but having a supply of fresh food would be desirable to sustain morale and also for another, fundamental, reason. Long-duration deep space missions would require large amounts of food adding to their launch weight.

"Launching seeds in place of additional packaged food also reduces the weight of supply payloads which reduces launch costs, an important consideration as the duration of NASA missions gets longer and astronauts require more life support," said Utah State University's Crop Physiology Laboratory website. Instead of packaged food for long [space](#) missions, crops grown in chambers such as those designed and built at Utah State University's Space Dynamics Laboratory, the site added, can provide [food](#) for astronauts, purify water, and recycle carbon dioxide into oxygen..

Next on the cosmonauts' agenda is to raise rice and bell peppers. Another noteworthy item on the agenda is a grass species, purple false brome, whose genomes have already been sequenced,. The researchers intend to look for possible genetic abnormalities. Their experimental greenhouse aboard the ISS is called Lada. The Russian researcher, Margarita Levinskikh, spoke recently at a conference in [Moscow](#), and her report was carried by the Russian news service RIA Novosti. "The experiments with peas have been very promising," she said.

Last year, NASA said its demo unit was to study the germination of plants in lunar gravity and radiation on the Moon. The self-contained habitat could be a payload on any NASA or commercial lunar lander. "After landing in late 2015," according to NASA, "water will be added to the seeds in the module and their growth will be monitored for five to ten days and compared to Earth-based controls. Seeds will include Arabidopsis, basil, and turnips." The experiment is also seen as an important step in knowing more about the use of plants for human life

support.

More information: cpl.usu.edu/htm/dwarf-crops-for-space-flight
www.nasa.gov/centers/ames/cct/...nt.html#.Uu8EGPldUu4

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