

Britain's favourite fresh produce magazine since 1895

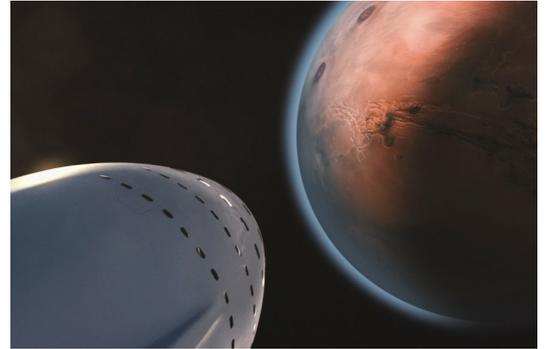


By Michael Barker

Monday 18th May 2020, 9:28 GMT

Salad 'can be grown on Mars'

New research shows rocket seeds were able to survive the stresses of space travel and grow successfully on their return to Earth



Breakthrough research has opened up the possibility of salad being grown on Mars and beyond.

Salad seeds sent to space on the International Space Station (ISS) have been found to grow only slightly slower when back on Earth, giving hope for the future of growing food on another planet.

The findings come after 2kg of rocket seeds spent six months on board the ISS with British European Space Agency (ESA) astronaut Tim Peake as part of his Principia mission. Here they would absorb up to 100 times more radiation than on Earth and be subject to intense vibrations from the stresses and strains of space travel.

When the seeds returned to Earth in 2016, 600,000 children from schools and groups across the UK took part in an experiment, supported by the UK Space Agency, to plant them and monitor their growth, comparing it to that of seeds that had remained on Earth.

The Royal Horticultural Society (RHS) tasked 8,600 schools and groups across the UK to take part in the controlled study, documenting their results as a scientist would. It was part of a project called Rocket Science, led by the RHS Campaign for School Gardening, in partnership with the UK Space Agency.

The results show that, while the space seeds grew more slowly and were more sensitive to ageing, they were still viable. It suggests that, by taking sensible steps to protect the seeds on their journey, it should be possible to grow plants in space or on another planet for humans to eat.

Other partners who worked on the research include the University of Marburg, Science and Advice for Scottish Agriculture (SASA) and Tozer Seeds.

Peake said: "In one of the largest and most inspirational experiments of its kind, more than half a million young people collected reliable data to help the

scientists at Royal Holloway investigate the effects of spaceflight on rocket seeds. When humans travel to Mars, they will need to find ways to feed themselves, and this research helps us understand some of the biology of seed storage and germination which will be vital for future space missions."

Professor Gerhard Leubner and Dr Jake Chandler, both from the Department of Biological Sciences at Royal Holloway, led the research, along with Professor Alistair Griffiths from the RHS. It has been published in the journal *Life*.

Chandler explained: "Transporting high-quality seeds to space and beyond will be crucial for growing plants that support human exploration of space, Mars and other worlds. Our study found that a six-month journey to space reduced the vigour of rocket seeds compared to those that stayed on Earth, indicating that spaceflight accelerated the ageing process.

"Thus, while we should carefully

<http://www.fruitnet.com/americafruit/article/1474/parts-of-san-diego-quarantined-as-psyllid-count-mounts>

© Copyright Market Intelligence Ltd - Fruitnet.com 2014. The copyright on this article and all content published on Market Intelligence Ltd - Fruitnet.com is held by Market Intelligence Ltd - Fruitnet.com Limited, a joint venture between Market Intelligence Limited and Dr Rolf M Wolf Media GmbH. All rights reserved. Neither this article nor any part of it may be reproduced, stored or transmitted in any form, including print-outs, screen grabs and information retrieval systems, without the prior permission of the copyright owners.

FRUITNET.COM

consider protecting seeds from potentially harmful factors including space radiation and mechanical

vibration, the seeds remained alive, and the prospect of eating home-grown salad on Mars may be one small step closer."

<http://www.fruitnet.com/americafruit/article/1474/parts-of-san-diego-quarantined-as-psyllid-count-mounts>

© Copyright Market Intelligence Ltd - Fruitnet.com 2014. The copyright on this article and all content published on Market Intelligence Ltd - Fruitnet.com is held by Market Intelligence Ltd - Fruitnet.com Limited, a joint venture between Market Intelligence Limited and Dr Rolf M Wolf Media GmbH. All rights reserved. Neither this article nor any part of it may be reproduced, stored or transmitted in any form, including print-outs, screen grabs and information retrieval systems, without the prior permission of the copyright owners.

FRUITNET.COM