

Salad could one day be grown on Mars

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 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.

British ESA astronaut Tim 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, which has been published in the journal Life.

Dr Jake Chandler, from Royal Holloway, said:

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 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.

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.

Alana Cama, Schools and Groups Manager at the RHS, added:

The Rocket Science experiment opened a window into space biology and allowed young people to be at the forefront of innovative research.

This research project did more than just inspire; it furthered our understanding of the challenges around growing plants in unusual environments and the feasibility of growing food on long term space missions in the future. Inspiring a new generation of botanists and biologists will remain a highlight of our mission to enrich everyone's lives through plants.

Humanity's drive and ambition to explore will rely upon thousands of research projects, just like this. The RHS looks forward to supporting and nurturing the talent of our young people in more exciting citizen science projects in the future.

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

Join Tim Peake, Dr Jake Chandler and Alana Cama on Monday, 18 May 2020 at 11.30am for a live stream and Q&A. Tune in to find out about life in space as an astronaut and the science behind the project.

[Click here to join from 11:30am](#)

Government grants Transport for London funding package

- package worth £1.6 billion confirmed to protect Transport for London (TfL) services
- deal will increase services to help make sure people can follow social distancing guidelines while travelling
- further boost for active travel through new segregated cycle lanes and wider pavements

The government has agreed a £1.6 billion funding and financing package for Transport for London to protect key services, helping people to stay safe during the pandemic and supporting the capital's gradual recovery from COVID-19.

TfL operates services for around a billion passengers a year, serving a city of 10 million. More bus journeys were completed in London last year than across the rest of England put together, but the coronavirus pandemic has had an unprecedented impact on the tube and bus network.

In order to safeguard services on the network, the government has agreed a package consisting of a mixture of grants and loans based upon a series of conditions agreed by the mayor, Sadiq Khan. This agreement includes increasing service levels as soon as possible to ensure people can follow social distancing guidelines while on the network, making sure those who have no alternative to public transport can travel safely.

A London COVID-19 task force, comprising representatives of the government and TfL, has been established to oversee operational decisions during the crisis. The collective focus will be on taking all practicable steps to increase the number of services as quickly as possible to benefit passengers who have no alternative to public transport.

In order to safeguard services in the future, the package will see the reintroduction of fares on buses and reinstatement of the congestion charge. It will also focus on promoting traffic management and active travel to maximise the benefits of the [government's record £2 billion investment in cycling and walking](#). This will include efforts to push forward new segregated cycles lines, pavement extension and road closures to traffic, making it easier for people to choose greener ways to travel.

Transport Secretary, Grant Shapps, said:

People should avoid using public transport and work from home wherever possible, but as measures are slowly lifted it is vital that Londoners who need to use TfL services feel safe and secure.

We must drive an increase in services to support social distancing and ensure our capital keeps moving, driving the economic recovery of this country going forward.

This deal will encourage a real move towards greener and healthier walking and cycling options, ease pressure on our public transport and provide certainty and stability for London's transport services in the future.

In order to reduce the risk of crowding and to encourage vulnerable groups to from using public transport at the busiest times when there is greater risk of transmission and it may not be possible to socially distance, the deal will see the temporary suspension of the Freedom Pass and 60+ card concessions to off peak hours. It will also see temporary suspension of free

travel for under 18s and special arrangements will be made to ensure children eligible under national legislation can still travel to school for free. These changes will take place soon as practicable.

To put TfL on a sustainable footing for the longer term and help safeguard its future, the mayor has agreed that the government will carry out an immediate and broad-ranging review of the organisation's future financial position and structure, including the potential for efficiencies. Two special representatives will represent the government on TfL's board, its finance committee and its programmes and investment committee, in order to ensure best value for money for the taxpayer.

The mayor has also agreed to increase fares next year on all modes by RPI plus 1%, in line with the proposals in TfL's own business plan, in order to put the organisation on a more sustainable footing.

The deal, a grant of £1.095 billion and a loan of £505 million, runs until October 2020.

The full terms of the agreement will be published in Parliament at the first opportunity.

[Three further flights to bring hundreds of British travellers home from Bangladesh](#)

Press release

The Government has announced three further charter flights from Bangladesh that will bring more than 900 British travellers home to the UK.



Details of the flights are as follows:

- 20 May – Dhaka to London
- 26 May – Dhaka to London
- 31 May – Dhaka to London

People who are most vulnerable will be prioritised for seats on the flights, which will bring the total number chartered by the UK Government from Bangladesh to 12.

Two connecting flights between Sylhet and Dhaka are also taking place on each of the days the flights from Dhaka to London are scheduled. Given the number of people who have already registered for a flight, the majority of seats are likely to be allocated to people who are already on the waiting lists.

To register interest in these flights, and for more information, British travellers should visit the travel advice pages for Bangladesh. If you have previously registered for a charter flight, you do not need to re-register.

Foreign Office Minister of State, Lord (Tariq) Ahmad of Wimbledon said:

These three flights will mean more than 900 British Nationals can return home, bringing the total number of travellers brought back to the UK from Bangladesh to more than 2800.

This has been a huge logistical challenge and we recognise the difficulties that people have faced and are grateful for the patience and understanding they have shown.

British High Commissioner to Bangladesh, Robert Chatterton Dickson said:

We have worked closely with the Government of Bangladesh, airlines and local authorities to help British travellers in Bangladesh return to the UK, focused on helping the most vulnerable people as a priority. These new flights will continue to do that, enabling hundreds more British visitors to Bangladesh to get back home.’’

Since the coronavirus outbreak began, the Foreign & Commonwealth Office (FCO) has worked consistently with governments, air carriers and travel companies to minimise disruption and help British travellers return home safely – supported with £75 million for special charter flights to priority countries, focused on helping the most vulnerable people.

Further information

Published 15 May 2020

70 million face masks for NHS and care workers through new industry deal

- Government agrees deal with technology company Honeywell to manufacture 70 million face masks for frontline workers
- New deal part of plan to unleash potential of UK industry to scale up domestic personal protective equipment (PPE) manufacturing
- The production line has capacity to produce up to 4.5 million masks each month and will create 450 new jobs at the production site

More than 70 million face masks will be manufactured in the UK and delivered to frontline health and care workers following an agreement with a global technology company, the UK government has today announced.

FFP2 and FFP3 masks will be produced over an 18-month period at Honeywell's site in Newhouse, Scotland, with production set to begin as early as July. Each month will see up to 4.5 million masks roll off the production line, ready for distribution to frontline NHS and social care workers.

It marks a significant moment in the government's 'make' programme, headed up by Lord Deighton, which seeks to unleash the potential of UK industry to scale up domestic PPE manufacturing.

The move supports the government's continued efforts to ensure PPE reaches those fighting the virus on the frontline, with over 1.25 billion items of PPE delivered to health and social care workers since the outbreak began.

Additionally, the new production line will create approximately 450 new jobs at the Scotland site.

Health and Social Care Secretary Matt Hancock said:

"These 70 million masks are the result of our challenge to UK industry to scale up domestic PPE manufacturing.

"This deal is brilliant news for the whole United Kingdom which will not only deliver the masks we need but create around 450 jobs in Newhouse, Scotland.

"I'm delighted to team up with Honeywell to open up another avenue to get millions of masks to the frontline and strengthen our ongoing response to the outbreak.

Lord Paul Deighton, adviser to the Secretary of State on PPE, said:

“As countries around the world face unprecedented demand for PPE, British industry is stepping forward to make sure vital pieces of equipment reach our workers on the frontline.

“My role is to increase our homegrown PPE supplies, both now and in the future, by investing in the potential of UK manufacturing. This fantastic deal announced with Honeywell today marks a significant step along the way.”

The government has ordered 70 million of the locally produced FFP2 and FFP3 Honeywell SuperOne disposable respirator masks. These are certified to the highest international PPE standards, compliant with EU regulations, and must meet UK quality and safety standards before being delivered to healthcare settings via the NHS Supply Chain from July.

Will Lange, President of Honeywell’s PPE business, said:

“As a global leader of high-quality personal protective equipment, Honeywell is committed to getting safety gear to those who need it most, including workers on the frontline in the fight against COVID-19.

“Our Newhouse facility has both the physical capacity and technical capabilities to launch a large-scale respirator production line in such a short timeframe, and we are proud of our teams who are bringing new manufacturing capabilities to the United Kingdom as quickly as possible to support the country’s response to the pandemic.”

Scottish Secretary Alister Jack said:

“As well as creating 450 new jobs and boosting the local economy it is great a company with manufacturing facilities in Scotland can help ensure our heroic frontline workers have the PPE they need to carry out their lifesaving work.

“Our UK-wide strategy is continuing to manage and supply protective equipment to the people that need it in all 4 nations.”

The agreement announced today is the latest in a number of steps the government is taking to ramp up PPE production and distribution. New collaborations between the government and organisations including Amazon, the Royal Mint and Jaguar Land Rover, will see increased production and delivery across all PPE products.

A PPE distribution network with the NHS, industry and armed forces, and a 24-hour NHS-run helpline that’s received around 35,000 calls since it was set up, have also been established as part of the government’s [national PPE plan](#).

- See [further information on the other companies the government is working with to manufacture PPE in the UK](#).
- [Honeywell](#) is a Fortune 100 technology company that delivers industry-specific solutions to help aircraft, buildings, manufacturing plants,

supply chains and workers become more connected.

- Honeywell's Newhouse plant specialises in electronic systems assembly and testing and other advanced manufacturing capabilities for several of Honeywell's business groups, and will continue to do so alongside the new face mask line.
- Honeywell will produce 60% FFP3 and 40% FFP2 masks, but these percentages are moveable depending on requirements.
- The agreement reached with Honeywell goes a significant way to help satisfy demand for masks for frontline NHS and social care workers.
- The government published its [national PPE plan](#) in April.

[Myanmar: UK national statement after Security Council closed VTC](#)

The UK welcomes the briefing on the situation in Myanmar that Special Envoy Christine Schraner Burgener provided Security Council members today. The UK requested this meeting because we are concerned by the recent escalation of conflict between the Myanmar military and the Arakan Army in Rakhine and Chin States, and the heavy toll this is taking on civilians at the time of a global Covid-19 crisis.

The conflict has already led to a spike in internal displacement, additional restrictions on humanitarian access, and an increased number of civilian casualties, including the killing of World Health Organisation employee U Pyae Sone Win Maung on 20 April. All this comes at a time when the Covid-19 pandemic puts vulnerable populations at risk of a humanitarian emergency, especially refugees, IDPs, and the Rohingya community who face additional restrictions.

The UK recognises that Myanmar is taking steps to address the pandemic. These include measures to slow the spread of the virus; a public awareness campaign led by State Counsellor Aung San Suu Kyi; a Covid-19 Economic Relief Plan to alleviate some of the economic hardships; and a joint commission between the Government of Myanmar and ethnic armed organisations to coordinate efforts against Covid-19 across the whole country.

The UK supports these initial positive steps. However, while conflict continues in Rakhine and Chin States, vulnerable people there are at even

greater risk than elsewhere from Covid-19. The conflict also makes it more challenging to address the long-term underlying causes of conflict in Rakhine and to create conditions conducive to the safe, voluntary, and dignified repatriation of Rohingya refugees, which remains an important and urgent priority. In this light, the UK expresses concern about refugees risking perilous boat journeys in the Bay of Bengal where a regional solution is essential.

Therefore:

1. Noting the Tatmadaw's announcement of a unilateral ceasefire on 9 May, the UK urges the Tatmadaw to extend this to include an immediate cessation of hostilities in Rakhine and Chin States.
2. The UK encourages the Myanmar authorities and all other actors to ensure unhindered humanitarian access to allow for safe and independent delivery of humanitarian supplies to all parts of Rakhine and Chin States, including IDP camps.
3. Noting the steps taken across Myanmar to tackle the Covid-19 pandemic, the UK urges the lifting of restrictions on internet access and action to ensure freedom of movement and equitable access to healthcare for all communities in Rakhine State, including conflict-affected populations, IDPs, and the Rohingya community.
4. Noting the National Strategy on Resettlement of IDPs and Closure of IDP Camps and recognising the challenges to its implementation created by Covid-19, the UK encourages Myanmar to ensure that any work to find durable and dignified solutions for IDPs is carried out in consistency with international best practice and the standards set out in the national strategy including on consultation.

The UK continues to appreciate the efforts of the UN, ASEAN and many donor countries in the support they are giving to Myanmar at this time, and underscores also its appreciation towards Bangladesh for its efforts providing protection and assistance to refugees until they are able to return to Myanmar.