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EXPERIMENTAL RESULTS OF THE PLAM TREE SEEDS (FROM THE UAE TO ISS)

**Abstract**

The UAE has set a long term to establish a settlement in Mars by 2117. The development of first mission to Mars with an orbiter scheduled to launch in July-2020. More missions will be planned to achieve the ultimate goal of the 100 years plan. The UAE Space Agency explores the possibility of cultivating palm trees on Mars. The palm tree was chosen because the environment on Mars is similar to the environment needed to cultivate palm trees. The agency aims to support scientific research in the space sector and strengthen the UAE's efforts to create local and international partnerships that will create food security on the Earth and in space. This is one of the key focus areas of research that scientists and experts from around the world are engaged in, and the palm seed experiment aims to advance understanding of cultivation and agriculture in space by attempting to germinate palm tree seeds in space and then studying them further upon their return to Earth. In parallel, the experiment will be conducted on palm tree seeds within the laboratories of the College of Food and Agriculture at UAEA, the Palm in Space's scientific and research partner, in order to enable scientists to study, compare and analyse the differences in growth between the seeds exposed to the environment in space and those that remained on Earth. The seeds sent to the ISS was returned to the Earth and planted at United Arab Emirates University (UAEU) to enable comparison and further study. Moreover, The Palm tree is very special tree in the minds and hearts of UAE citizens as it considered a symbol of the UAE heritage. This paper will outline the experimental results achieved from the space and compared with in ones planted on earth.