

Chinese astronauts successfully grow rice in space

September 6 2022, by Andy Tomaswick



Rice growing on the space Tiangong space station. Credit: CGTN

Rice is one of the world's staple crops. It is regularly eaten by more than

half the world's population. And now, it's been grown in microgravity, on board the newly launched Chinese Wentian space laboratory.

Wentian launched in July and joined up with the Tianhe module of China's new space station. Its original complement of eight experiments included one that attempted to grow rice in [microgravity](#).

Rice typically grows to 3 to 4 feet over four months, and the stalks on Wentian have not been able to complete their entire maturation cycle since the experiment started in July. However, they seem to be on track compared to their Earth-bound counterparts.

There were actually two types of rice launched as part of the experiment. A tall shoot variety reached almost 30 centimeters in the first month of growth, and a dwarf variety reached around 5 cm. Both of these growth amounts are on par for these particular rice varieties on Earth.

Rice isn't the only thing in the experiment, though. Scientists added *Arabidopsis thaliana*. It's a common flowering plant typically used to study [genetic mutations](#), which can be especially helpful when carrying out experiments in space.

Rice and mutation studies both have a long history in spaceflight. The Apollo 11 astronauts ate freeze-dried chicken and rice during their journey to the moon. And any space-based farming effort will surely include rice. So this is a step in the right direction.



Arabidopsis thaliana growing on the Tiangong space station. Credit: Chinese Academy of Sciences

This also isn't the first time China has sent rice into space. Some hitched a ride on the Chang'e 5 in November of 2020 on its ride around the moon. Other crops have ridden with other Chinese spacecraft as well. These studies focused on improving the yield of these crops, as rice that is expected to the radiation environment of space have higher yields once planted back on Earth. This burgeoning industry has seen more than 200 types of crops modified in this way, and experiments are continuing.

This isn't the first time rice has been successfully grown in space. A team of students from Indonesia tested the effects of growing [rice](#) in microgravity on the ISS back in 2016.

For now, the experiment continues apace, and the scientists running it hope to get seeds that they can bring back to Earth to study if there were any significant differences having been grown in microgravity. Assuming there isn't, these experiments could point to a bright future in [space](#) for one of the world's most important crops.

Provided by Universe Today

Citation: Chinese astronauts successfully grow rice in space (2022, September 6) retrieved 25 April 2024 from <https://phys.org/news/2022-09-chinese-astronauts-successfully-rice-space.html>

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