



Summer School

# Food for Mars and Moon

**Migration to planet Mars or living on our Moon, is it just a daydream or a twilight of the next leap for mankind? With the fast developments in the space science and agrifood domain, it seems this dream is getting closer, especially for the Moon, where we will return in the upcoming years. But what will we eat when we live on the Moon or on Mars? This global summer school aims to bring young people, both students and professionals, together to work on this ambitious topic, by inspiring lectures and discussions from experts all over the world. The afternoons will be dedicated to a own experiment or/and a challenge.**

## Target group

This program is designed for everybody who is interested in space food and learning about a different way of growing crops in space, but also on Earth. Students and (young) professionals preferably with an biological or ecological background are welcome.

## Results

The aim of the summer school is to learn about living in space, especially on our Moon and Mars with the focus on growing your own food at the site. The first part of the day will be dedicated to lectures and discussion, the second part to an experiment or/and a challenge. The goal of the experiment will be to grow your own garden cress on Mars regolith simulant and from the worldwide results we will try to find an effect of gravity on the plant growth. Materials for the experiment will be send over before the beginning of the summer school. Not provided will be a greenhouse.

<b>Date</b>	<b>10 – 21 July 2023</b>
<b>Location</b>	<b>Online/ Wageningen Campus</b>

Course leader	Dr. <i>ir.</i> Wieger Wamelink, Ecologist and Space Farmer, Wageningen University & Research
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## Outline and topics

The course gives you a broad spectrum on space live and crop growth with:

- Regolith ('soil') quality
- Crop growth on the regoliths
- Needed hardware
- External factors influencing plant growth
- Waste recycling
- Sustainable agricultural ecosystem
- The application of animals and bacteria
- Rearing insects (mealworms) for food

Part of the summer school exist either out of an experiment and/or a challenge  
Leading international experts from Wageningen University & Research, other research institutes from all over the world are engaged in this program.

## Programme

Day 1: Monday 10 June 2023

- **General introduction to our solar system and Mars and the Moon**
- **Introduction experiment and challenge**
- Afternoon: **Introduction experiment and challenge**

Day 2: Tuesday 11 June 2023

- Morning: **Exobiology**
- Afternoon: **Tend to experiment and/or challenge**

Day 3: Wednesday 12 June 2023

- Morning: **plant growth and challenges with the regoliths**
- Afternoon: **Tend to experiment and or challenge**

Day 4: Thursday 13 June 2023

- Morning: **plant growth and challenges with the regoliths**
- Afternoon: **Tend to experiment and or challenge**

Day 5: Fryday 14 June 2023

- Morning: **plant growth and challenges with the regoliths**
- Afternoon: **Tend to experiment and or challenge**

Day 6: Saturday 15 June 2023

- **Excursion related to this topic in the Netherlands**

Day 7: Monday 17 June 2023

- Morning: **Effects of radiation**
- Afternoon: **Tend to experiment and or challenge**

Day 8: Tuesday 18 June 2023

- Morning: **Algae for proteins, medicine and as manure**
- Afternoon: **Tend to experiment and or challenge**

Day 9: Wednesday 19 June 2023

- Morning: **Crop growth in space under zero gravity**
- Afternoon: **Tend to experiment (harvest) and or challenge**

Day 10: Wednesday 20 June 2023

- Morning: **Insects for proteins**
- Afternoon: **Tend to experiment (harvest) and or challenge**

Day 11: Friday 21 June 2023

- **Wrap up, present experiments, challenge result**

## Practical information



€ 1,250 euro for professional and 750 euro for students



Max. 35 participants.



Based on your attendance you will receive a certificate after the programme is finished.

## Registration

Enrollment is possible until 30 juni 2023, or if the maximum number of participants is reached. Register via [wur.eu/academy](http://wur.eu/academy).

Register

## Wageningen Academy

We develop and organise courses for professionals, based on Wageningen University & Research expertise.

### Contact

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