

## Insect NanoLab Q and A

I was lucky enough to have a conversation with Shelby Smith of Gym N Eat Cricket as she was driving to another state for selling her many cricket snacks. She was kind enough to share all kinds of knowledge about growing crickets in Earth gravity even though she had no idea how crickets would behave or be affected by zero gravity. That will be the job of the experimenters. And your job is to make it easier for those scientists to get their ideas on orbit.

The most important things to think about for growing crickets is

### Shelter      Food      Water

The crickets will need at least 2 cm<sup>2</sup> per cricket or they will start eating each other. How might that be different in zero gravity where floor space is not as important?

The food you provide for them needs to have some kind of animal protein in it or the crickets will start eating each other (I can't blame them, they are very yummy 😊)

She uses an organic chicken feed.

The cooler the temperatures the slower they will grow

90° F is optimal for the eggs to grow

87°F for the fastest growth rate for the young to adult stages—at this temperature they will live about 47 days (at least on earth)

It would be OK to send them up as eggs but do not send them up as infants as they are very fragile and might die during launch

I am certain that I have forgotten some of the most valuable information from our conversation. Thankfully Shelby has several videos on YouTube about growing crickets. Please check it out.

<https://www.gymneatcrickets.com/faqs>



One of the schools in New York had a cricket grower come to their class give a talk and now the class is going to start growing crickets soon.

Check out what Samantha is doing on the Space Station

<https://twitter.com/AstroSamantha/status/1573360831642968065>

One of the easiest insects to grow are meal worms.

On the pdf, one requirement was that insects cannot be harmful to humans. An insect we were thinking about selecting was termites; however, we feel that termites wouldn't be harmful to the space station and/or the astronauts aboard. We think that because of the termite's easy ability to be fed, long lifespan, and nutritional value they're a perfect choice. We wanted to make sure that we could use termites in this project.

I think termites are a great option. Since our space station is made out of aluminum, not wood, I can't imagine that there would be any kind of problem with them. I don't know how to raise them or what kind of temperatures they need. If you are trying to grow these at home, your parents might have some concerns if they get out in your house.