The 2023 SF Adventures Souvenir Booklet Series: The Food Edition

By

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Planetary Cuisine and *BLOG 2224: Introducing the StrawBanany* are works of fiction. Names, characters, places, and incidents are the product of the author's imagination or are used fictitiously. Any resemblance to actual persons, living or dead, events, locales, or organizations is entirely coincidental.

Cover Art Credit: https://chemaust.raci.org.au/article/march-may-2023/how-science-fiction-predicted-recent-high-tech-developments-chemistry.html

SF: The Food Edition

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BLOG 2023: Lab Food: Better Than from an Algae Vat?

With the recent FDA approval of lab-grown meat for human consumption (AP article here), I thought I might talk about how science fiction has thought about feeding the masses when we're not living on Earth.

But let's start with the concept of "manufactured" food replacing grown food.

Back in the day, when I was a graduate student in Ecology at the University of California at Santa Barbara, we learned to calculate the energetics of an ecological web, asking questions about how much energy each level of consumption in a food chain derives from the level below. Our professor, being Scottish, had us calculate the energetics of predation in Loch Ness; sorry—no Nessy! So I appreciate it when someone "does the math" on grandiose claims. To understand the energetics of lab meat production, I tried to find out where the "raw materials," what the companies call the nutrient bath, come from.

No luck. I found descriptions of what generally is in the bath: water, growth hormones, nutrient molecules, etc. but nothing on how it's made or where it's sourced. So—more research is needed.

But I did find an article that did the math on how many factories would be needed to replace grown meat with manufactured meat. It's a long read, but you might find it interesting. (Lab-grown meat is supposed to be inevitable. The science tells a different story.)

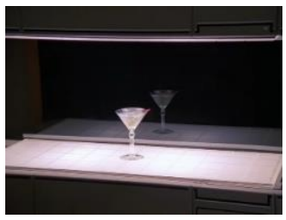
Bottom-line is it's unlikely that the economics or sheer scale of manufacturing capacity required are feasible without significant scientific breakthroughs or external forces that might change the economics.

But someday, maybe in my or your lifetime, humans will live on the Moon, Mars, or long-term stays on space stations, etc. At some point, we will likely need to manufacture food where we live rather than shipping it from Earth, and we'll need to solve the raw materials and production issues.

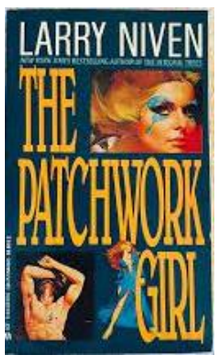
But how? Does science fiction provide some insight; let's see.

We have to start with Star Trek. In the original series, it looked like food came out of a slot and was composed of various multi-colored nodules. Yum?! I'm with Riley—this looks unappetizing, and we never find out how they make it. At least by the movies (e.g., "The Undiscovered Country"), the crew sits down with the Klingons to what looks like a meal of "real" food. Again, no clue where it comes from.

[Image Credit: https://collectingtrekca.files.wordpress.com/2022/03/86a7b-star-trek-the-conscience-of-the-king-hd270.jpg]



Fortunately, by The Next Generation, we had replicators. But in some instances, the food might not have been very satisfying; real food was what they craved. Although, in the video, this martini was apparently pretty good. (The video at the link is about 4 minutes but is a fun compilation of food-related vignettes. Fun to see the two "Q: What is it? A: It's green." scenes next to each other.) Video: https://www.youtube.com/watch?v=ZHjqCCkpzd8



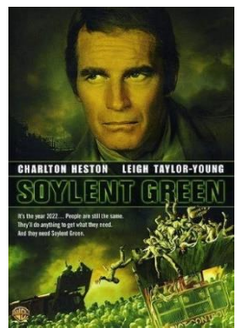
In his SF murder mystery, The Patchwork Girl, Larry Niven describes The Garden, a vertical shaft in the middle of Hovestraydt City on the Moon, which was festooned with crops: grains, fruits, vegetables, and flying chickens. Niven forecasts we'll be growing our food like we do on Earth. Open question: where does the organic matter to grow the plants come from?

[On another note: the book's a great sci-fi read and a real "whodunit." Check it out.]

The list could go on. A common trope is we'll grow fungi or food in algae vats, or some machine will produce perfectly balanced nutrition. In the second Foundation Trilogy, vast algae farms feed Trantor, at least in part. And in one of my favorite books, *The Caves of Steel* by Isaac Asimov, robotic farms on the surface harvest cellulose to supply the vast algae factories to feed the population of Earth's cities.

In the end, we'll have to wait and see. Science Fiction presents some interesting options, but who knows, maybe growing salad fixins on the International Space Station might be the beginning of an answer. (https://www.nasa.gov/content/growing-plants-in-space)

One last movie reference and a harbinger of an approach we might not want to take, and then I'm done—honest. The classic Soylent Green depicts an overpopulated, resource-depleted Earth trying to feed the masses in 2022. In solving a murder mystery, Detective Thorn discovers a horrifying reality—and we don't want to go there.



[Video: https://www.youtube.com/watch?v=b2aH9tu4s30

SPOILER ALERT – if you have not seen the movie and want to be surprised by the ending – DON'T CLICK THE LINK!]

Image Credit: https://www.amazon.com/Soylent-Green-Charlton-Heston/dp/B0016I0AJG

I hope you enjoyed this excursion into manufactured food. We've got a long way to go, but I'm sure we'll find ways to make it fun and tasty.

Thanks for dropping by and leave a comment if you'd like.

Planetary Cuisine

I am beyond ecstatic to be heading home to Kanamit. These humans have exhausted me. Not quite like cattle, but gullible, oblivious, and self-absorbed.

Their arrogance made it easy for us to be accepted. Of course, they'd believe an advanced species would travel light-years to rehabilitate their miserable, insignificant planet, and end wars and famine for them. Why wouldn't we want to apply our technological advances to spread plenty and abundance across the rock they seemed bent on destroying? And certainly, we'd "pay the freight", to use an Earth saying, to have them visit our home.

On the other hand, it did make it easier, not having to transport the humans to our collection sites; all eager to board the ships for the trip to our world.

A knock at my door. Ah—that must be dinner. I'm looking forward to what the chef has concocted.

"Come in. The hatch is unlocked."

My adjutant enters, and yes, indeed, he has brought dinner.

"That is a remarkable new aroma, Kiel."

"It's an Earth recipe, Ambassador Kiel—barbecue. This particular offering is from a place they call Texas. But the chef tells me different regions have different recipes. Each group is very proud of their local fare and touts it as the best barbecue."

I share a smirk with Kiel. "How very human of them."

I taste the succulent flesh; the savory, smokey flavor is lovely, and the meat is tender and juicy. Absolutely the best meal I've had since we arrived.

"This is fabulous, Kiel. I must get the recipe. My wife would just love this."

"You're in luck, Ambassador. Chef Kiel has collected all the regional recipes into a new cookbook he'll be publishing: *To Serve Man: Southern Style.*"

BLOG 2224: Introducing the StrawBanany – Crafting the Perfect Smoothie

A Note about the blog posts from the future [CE 2224]: In January of 2021, with Perseverance due to land on Mars the next month, NASA activated their experimental Quantum Transmitter. The transmitter was designed to communicate with Perseverance, without regard to location and at faster than light speeds—near real-time. Unfortunately, they lost the connection after the initialization routine was completed. However, as an unintended consequence, NASA connected with a specific locus in the space-time continuum located on the Moon in 2224. That locus was the storage device of the quantum computer of a popular blog site. It is from that blog site that these blog entries are extracted. I hope you enjoy a peek into our future, and hopefully, I'm not violating some temporal directive. So far, no visit from the time cops.

Guest Author: Yosef Slor, Director of Crop Development, Luna Agricultural Research Cooperative

Originally Posted: Monday, June 28, 2224 (Earth Standard Calendar)

It is my great pleasure to introduce the latest new fruit developed by the Luna Agricultural Research Cooperative: The StrawBanany.

The StrawBanany is a vine-grown fruit the size of a large apple, approximately eight centimeters in diameter, with the flavor of strawberries and bananas. The geneticist preserved the strawberry form, and we hope restaurants and customers will appreciate the dark red color and large fruit size that will enhance their displays and dishes.

The Cooperative developed the new fruit using engineered strawberry cuttings imported from the Volcani Institute-Agricultural Research Organization in Israel. The Volcani Institute has a centuries-long history of introducing new fruits and vegetables to the commercial and retail markets, and the Cooperative is grateful for its participation in bringing this new fruit to market.

The Cooperative has been carefully engineering the new fruit in Sector 5B of the Plinius hydroponic farming chamber. Over several years, genetic engineers have increased the fruit size, developed a fruiting protocol that does not require pollinators, and enhanced the root structure to optimize the efficient uptake of nutrients from the hydroponic fluids.

One of the harder inscriptions on the base fruit's genome was coding for the metabolic processes that produce the distinct banana aroma generated by isoamyl acetate. This organic compound has the propensity of masking other flavors and aromas and making

everything taste like bananas. The engineers were able to modulate the new fruit's production of isoamyl acetate and retain the distinct taste of the strawberry. It's a popular combination we hope our customers find enjoyable in a single fruit.

As an unexpected byproduct of engineering the flavor, the engineers found they could significantly increase the nutritional value of the fruit. For those who look for healthy nutrition and great taste, each StrawBanany fruit is a complete breakfast. All in all, a single fruit for breakfast comes in at 500 calories and provides 25 grams of healthy fat, a healthy dose of omega-3 fatty acids, 56 grams of total carbohydrates, 10 grams of fiber, 6 grams of sugar, and 24 grams of protein. Eat it right off the vine, or throw it in a blender—you don't even need to add water.

We hope the public will enjoy our new fruit. It should begin appearing at public dining halls, restaurants and available for purchase in the next several weeks. We expect year-round production depending on demand.

Enjoy and stay healthy. For more information, please visit LunaAgricultural.ag.luna/StrawBanany.

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Volume I: The Tharsis Plateau, Season 2

https://wstevewilson.com/short-fiction/the-tharsis-plateau/the-tharsis-plateau-season-2/

Volume II: The Food Edition

[This Volume]