What Do Microgreens Taste Like?

What do microgreens taste like?

That was the question Judy, my best friend's wife, asked me several months ago at dinner. We were talking about what it meant to be vegan versus following a plant-based diet. I introduced microgreens into the conversation, and that was the first question. Duh?! Ah? JPure Farms grew only arugula and broccoli back then. I couldn't answer. That got me thinking.

Each microgreens vegetable has its own unique taste. Most have a taste or an aftertaste identical to the mature plant. But they have a wider taste profile.

They hide their flavor.

- **Basil microgreens have a lemony (sweet and sour) aftertaste.**
- **Carrot microgreens taste just like carrots.**
- **Beet microgreens are earthy (taste like dirt).**
- **Radish and mustard greens are spicy.**
- **Kale microgreens are sweet.**

- **Sunflower microgreens are sweet and nutty.**

And "tasting" involves more than just the five (or seven depending on who you listen to) basic tastes that your tongue is sensitive to: *sweet, sour, bitter, salty, and umami*.

And how you thought you tasted with your tongue is all wrong.

You use four of your five senses tasting microgreens: sight (they have a range of colors), smell (some are pungent), feel (with your tongue), and taste.

So, the next time you try microgreens at a restaurant, at home, at a friend's, and someone asks you, "What do microgreens taste like?", this post will show you how to taste them and help you answer that question.

Quick Reads

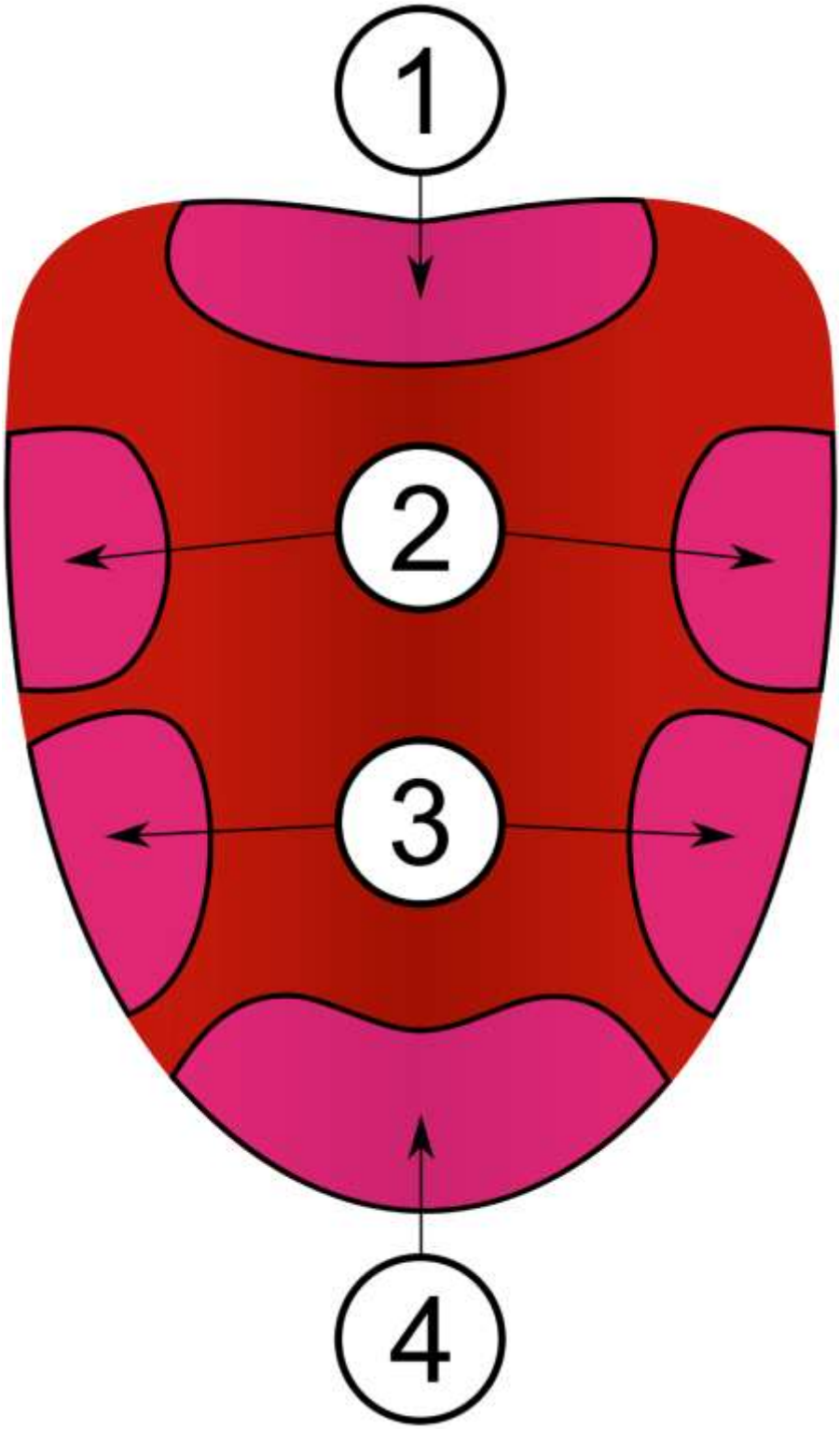
- The Science of Taste
- Is it Five or Seven Tastes?
- The Range of Your Tastes
- A Microgreens Taste Chart
- Your Microgreens Tasting Party

You can continue reading the article below, or download the PDF version here: [download link]

The Science of Taste

Remember that diagram of the tongue you learned in 9th grade biology (or 3rd form general science)? It comes from the 1901 PhD dissertation of German scientist, David Pauli Hänig.

He experimented and learned that the tip and the edges of your tongue was the most sensitive to different tastes. He created a graph of the tongue and showed bitter across the back, sweet across the front, salty at sides near the front and sour at the sides towards the back.



One hundred years later, scientists have proven that idea wrong.

They located receptor cells for sweet, sour, bitter and umami (savory).

In 2010 they located the salty receptor cells.

We have 8,000 taste buds each containing different receptor cells for each of the five tastes.

You have taste buds in the roof of your mouth and in the back of your throat. How do they know?

Scientists take a round piece of paper (wafer), place a drop of PROP (6-n-propylthiouracil) on it and put it into your mouth. Recall the most bitter taste you ever experienced, and multiple by 100.

Turns out that taste sensitivity is on a sliding scale. Put this PROP on an under-taster's tongue, and he might just taste bland paper. On your tongue, well, you might get sick. This stuff is bitter.

25%	50%	25%
Under-Tasters	Everybody Else	Super Tasters

Table 1 The Tasting Spectrum

HOME EXPERIMENT: You can buy this PROP at your local drug store. So, go get yourself some blue food coloring and some paper wafers. Put the paper in your mouth. Taste buds don't stain. You will see the bumps. Look in the mirror. You may need a magnifying glass. Your tongue will blue but the taste buds should still be pink. Thirty or more, you're a super taster. Less than five, an under-taster.

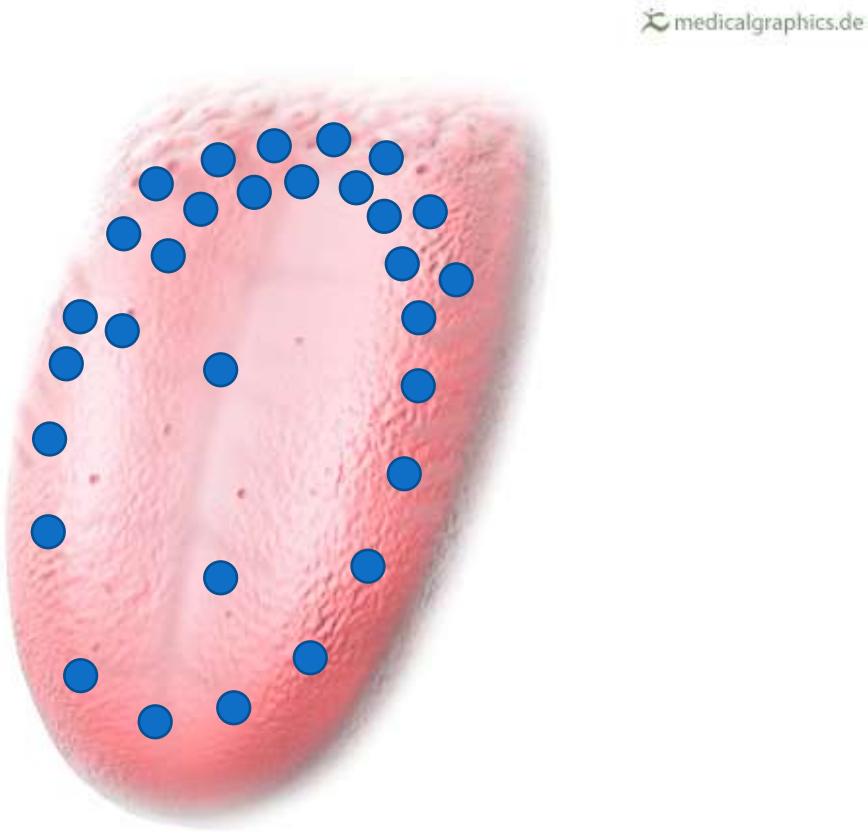


Figure 1 Bitter, Source: http://www.medicalgraphics.de/en/free-pictures/organs/tongue.html#joomimg

Is it Five or Seven Tastes?

Scientists disagree how many types of tastes we can detect.

However, since the 2010 discovery of the salty receptor, your children learn that there are five basic tastes that their tongues are sensitive to: *sweet, sour, salty, bitter and savory (umami)*.

Yet some scientists continue to disagree whether umami (savory) is a taste!

Umami is a light taste, like chicken broth, or parmesan cheese. They believe you use it to detect protein.

Food scientists continue to discover new receptors. Since 2010 they proposed new receptor cells on the tongue. The new tastes include:

- Calcium

- Fatty: A specific receptor responds to linoleic acid (found in sunflower oil, soya bean oil, and corn oil)
- Lysine
- Water
- Carbonation
- Alkaline: as in brine, and the opposite of sour
- Metallic
- Soapiness
- Hydroxide

And though food scientists are not in consensus beyond sweet, sour, bitter, salty, and savory, taste is way over four or five spots on your tongue.

Taste is not as simple as it seemed in 1910.

The Range of Your Tastes

Let's agree that there 5 basic tastes. Five tastes in any combination is 125 different tastes. "Sweet and sour" is only one of them.

Now based on tasting spectrum (*Table 1)* let's agree that on the scale from 1 to 100 there are 10 levels of intensity.

Sweet	Sugars and some proteins trigger sweetness. Your brain needs at least two "sweet receptors" to activate. You can detect 10 millimoles of sucrose in per liter, 30 millimoles per liter for lactose
Sour	This taste detects acids. The receptors combine hydrogen, sodium and potassium ions.
Salty	Sodium chloride (and a few other salts) trigger these receptors.
Bitter	Gustducin, a G protein, is the taste that allowed your ancestors to avoid accidental poisoning. The bitterest substance known is the synthetic chemical denatonium, discovered in 1958. Scientists named them T2R's (taste receptors, type 2).
Savory (Umami)	Free glutamates found in fermented (soy sauce) and aged foods (cheese) trigger this taste. Savory is important in Japanese and Chinese cooking. It is not part of Western cuisine.

Table 2 A Sense of Taste

That's 125 to the tenth power, or 93,132,257,000,000,000,000 different flavors you can taste.

Taken together with the senses of touch, temperature and smell, there are an enormous number of different flavors.

Your sense of touch also has a lot to do with your taste. Which do you prefer, crunchy versus smooth peanut butter? And don't forget smell. With a stuffed-up nose, anything in front is a plate of bland food.

Food scientists say you can detect 10 types of aromas or smell. They are:

- Fragrant (e.g. florals and perfumes)
- Fruity (all non-citrus fruits)
- Citrus (e.g. lemon, lime, orange)
- Woody and resinous (e.g. pine or fresh cut grass)
- Chemical (e.g. ammonia, bleach)
- Sweet (e.g. chocolate, vanilla, caramel)
- Minty and peppermint (e.g. eucalyptus and camphor)
- Toasted and nutty (e.g. popcorn, peanut butter, almonds)
- Pungent (e.g. blue cheese, cigar smoke)
- Decayed (e.g. rotting meat, sour milk)

A Microgreens Taste Chart

Each microgreen variety tastes like a clearer flavored (and often more potent) version of the adult plant.

- Arugula microgreens taste more like arugula.
- Cilantro microgreens are more potent than full-grown cilantro.
- And basil microgreens are lemonier than basil.

Sometimes, they can alter the flavor profile of your meal.

Every vegetable goes through a microgreen stage. Some you should not eat, like eggplants.

Some microgreens are popular because of taste, appearance, and growing conditions.

They include sunflower, broccoli, kale, arugula, and basil.

Less popular ones you can find are radish, mustard green and buckwheat.

Here are the ones we've grown and tried here at JPure Farms:

Microgreen	Taste	Aroma	Flavor	Intensity
Alfalfa	Sweet		Crunchy and Nutty	Mild
Amaranth	Sweet		Earthy	Mild
Arugula	Savory	Pungent	Nutty	Strong
Basil	Sweet		Spicy	High
Beet	Sweet		Earthy	Mild
Broccoli	Bitter		Crunchy	Mild
Bok Choy	Sweet	Juicy	Earthy	Mild
Buckwheat	Sour (Tangy)			
Cauliflower				Peppery
Cilantro	Sour (Lemony)		Citrus	Strong
Clover	Sour	Fruity	Nutty	Mild
Cress	Bitter			Peppery
Dun pea	Sweet		Crunchy	Strong
Fava bean	Sweet	Juicy	Crunchy and Nutty	
Flax	Savory		Nutty	Spicy
Kale	Bitter		Crunchy	Mild
Kohlrabi	Sweet			Mild
Lentils	Bitter			Mild
Lettuce	Sweet			Strong
Mustard	Sweet		Spicy	Mild
Parsley	Sweet		Fruity	Mild
Quinoa	Bitter		Woody	Mild
Radish	Sweet			Strong
Sorrel	Sour (Lemony)		Tangy	Peppery
Sunflower	Sweet		Nutty	Mild
Wheatgrass	Sweet and Bitter		Grassy	Mild

Your Microgreens Tasting Party

Microgreens flavors evolve as their leaves begin the process of photosynthesis.

And the leaves can taste different from the stems.

Try different varieties that range from fruity and sweet, to earth and salty, to spicy and bitter.

Use them in sandwiches, wraps and salads, as toppers on pizzas, on avocado toast or bruschetta

Want to know what do microgreens taste like? How do you know which microgreens you will like? Arugula is savory (a peppery spiciness). Radish is sweet but tastes like radish. Kale is bitter. Sunflower is sweet, and nutty like the seeds, with a spicy aftertaste.

If you want to know what microgreens taste like, and you haven't tried them before, I'd start with Arugula or Sunflower.

Add them to dishes such as pasta, soups, salads, omelets, or vegetable plates. Sprinkle them over mashed potatoes and served as a side dish.

They're sweet, crunchy and nutty, with a good fridge life. And they are the least expensive.

Why not invite your friends over and have a microgreens tasting party?

Andrew Neves

I'm the co-founder of JPureFarms, a startup. I live in Atlanta, Georgia, and enjoy urban farming, growing and writing about microgreens and their incredible health potential. I love my greens!