



## How Long Can You Store Microgreens at Home?

My family loves microgreens, but we're not big on leftovers. That's why when my son asked, "How long can you store microgreens", it got me thinking.

We hadn't thought about that before. We grow small trays (5"x5", and 2" deep) at home perfect for growing small amounts of microgreens. That's about enough for everybody to get two servings at any one meal (35 grams).

And if we have any leftovers, they go in a plastic Ziploc® bag, and one of us eats them the next day. My son's job is to compost the roots and soil.

Did you know that in the U.S. uneaten food is the largest component of municipal solid waste?

It represents much of the country's total methane emissions.

So, we did some experiments and check out some research for you on storing microgreens at home.

I hope this post answers your question.

**Microgreens are a new crop, have not been as studied or analyzed, and there are very few associations or cooperating groups of microgreen growers.**

**So, it's hard to say how long you can store microgreens at home.**

Microgreens experience **senescence**, the moment we harvest them.

Typical microgreens are perishable and have a short shelf life if you grow them yourself. If you buy your microgreens, then the shelf life is even shorter.

There are at least three factors that affect the shelf life of microgreens:

- *storage temperature (humidity and light)*
- *harvesting (cutting, washing, drying)*
- *packaging and air mix.*

Each of them can affect the microgreens' shelf life from 1-to-2 days, 5-to-8 days, 10-14 days, or even up to 21 days.

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## Combating Urban Food Deserts

If you live in an urban city like we do, you shop at markets that can limit your access to foods like microgreens.

This creates "food deserts" in urban areas where you and I do not have easy access to foods full of nutrients.

And when fresh produce reaches your supermarket, it lost nutritional value during transport.

You have friends and coworkers are talking about the [taste and nutrition of microgreens](#) but can't find them.

That's because they are perishable.

Without refrigeration, they last one to two days.

The short shelf life doesn't make for big marketing campaigns because of the high costs in the shipping and distribution to restaurants and supermarkets.

And if you do not consume them in days they wilt, become moist, start smelling and lose taste. You will discard them, creating unnecessary waste.

Several urban farms across the country, including our own JPure Farms, are growing microgreens to consume.

Local production and consumption of microgreens plays a part in reducing greenhouse gasses caused by the 30–40% of produce that end up in landfills across the world.

But why do microgreens have a short shelf life?



Figure 1 Sunflower Microgreens Respiring

## Short Shelf Life

We know from hundreds of studies that the respiration rate of a crop determines its shelf life, [including microgreens](#).

Plants respire by using the sugars produced during photosynthesis plus oxygen to produce energy for growth.

Respiration is the opposite of photosynthesis.

Unlike mature plants, microgreens respire during the germination process.

We harvest microgreens at the cotyledon stage. As soon as you cut them, respiration speeds up, and they die.

Every commercial grower's goal is to extend shelf life.

They optimize post-harvest handling conditions to achieve this.

The focus is to reduce the respiration rates of microgreens.

There are studies underway [to identify ways to extend the shelf life of microgreens](#) which could make cross-country transportation workable.

What are some harvesting activities that help increase microgreens storage at home?

## Harvesting (Cutting, Washing, Drying)

If you buy your microgreens, they come in a plastic package, cut, triple washed, kept at a set temperature. You just take some out, wash them and serve.

The rest you store. We'll talk about that later.

What if you're like me? You grow your own?

## Preparing Your Microgreens

Microgreens are tender and you want to be careful cutting, washing and drying them. You want to do it fast so you can cool them. This will slow the rate of respiration, spoilage and senescence.

### *Cutting*

You should know that [blunt blades reduce the storage life of fresh-cut leafy vegetables](#).

So, you want to cut your microgreens with a sharp blade to prevent bruising, damage, and increasing respiration.

Use a very sharp scissors or knife. And if you want to take it to the next level, sterilize them with 75 ML/100 ML alcohol.

I've read where some home growers use ceramic scissors, rather than steel. But I cannot verify whether using them extends storage.



Figure 2. Our Home-Grown Radish Microgreens.

## *Washing and Cleaning*

You want to wash any dirt from the cut plants.

- Put cold water, as cold as you can get it, in your kitchen sink.
- Wash the greens.
- Rinse under running water.
- Place each plant on paper napkins or a clean terrycloth (100% cotton).

You want to work with speed.

I've read some folks recommending adding regular bleach.

There is some research that shows [calcium chloride](#) could be significant in improving shelf life.

I would recommend you not use these compounds. Professional growers I know use food-grade hydrogen peroxide, about one teaspoon per two gallons of water.

*This can extend the shelf life by another 2-3 days (along with proper packaging and cooling)*

## Drying

You can just put paper towels on top of the microgreens and pat them. You can do the same with terrycloth.

We tried using a salad spinner along with a small fan to dry our radish microgreens. Just make sure you keep a close eye. The fan may not be always necessary.

You want to make sure they stay moist, not dry.

## Packaging

You can store microgreens in just about anything. Use glass bowls if you intend to eat them within a few hours.

We are no big leftover fans. We try to eat our homegrown microgreens within two to three days.

For packaging, we use glass bowls with plastic Tupperware covers. We wash and sterilize in our dishwasher after every use.



If you bought your microgreens, they came in clamshells made of recycled plastic. But for us, that's just adding to the waste pile.

You should be able to store your microgreens at home for about 5 days, if you followed my harvesting tips and with the right packaging.

However, if you intend to store your microgreens at home longer than a week, you'll need something that allows for some air circulation.

*Tip: Place the microgreens on a paper towel at the bottom of the container to prevent too much moisture in the container.*

It is the excess of water in the container that turns them dead and slimy, or the lack of humidity that dries them out and they go limp.

## Air Circulation

Air circulation and the right humidity are important for growing microgreens.

But too much air in storage will just dry them out, reducing storage time.

So, Ziploc® bags are okay.

The key I found was a normal use: *open the bag at least every two or three days. This allowed a bit of air to get in.*

Microgreens need to be moist, with some air circulation to avoid them spoiling. This can be tough in a refrigerator.

Lowering the temperature during storage slows cellular metabolism and slows respiration.

Slowing the metabolic rate also keeps the microgreens looking green and crisp.

So how low do we need to lower the temperature to extend shelf life?

## Storage Temperature: Know Your Fridge

At 4°C (39°F), the shelf life for some microgreens might be 14–21 days. Turn the temperature up 6°C (11°F) and you reduce shelf life by 50% (7-10 days).

The bottom shelf is the coolest part of the fridge. Keep your microgreens here in an airtight container to keep them fresh and free from spoilage.

If you bought your microgreens, you could store them here for five days.

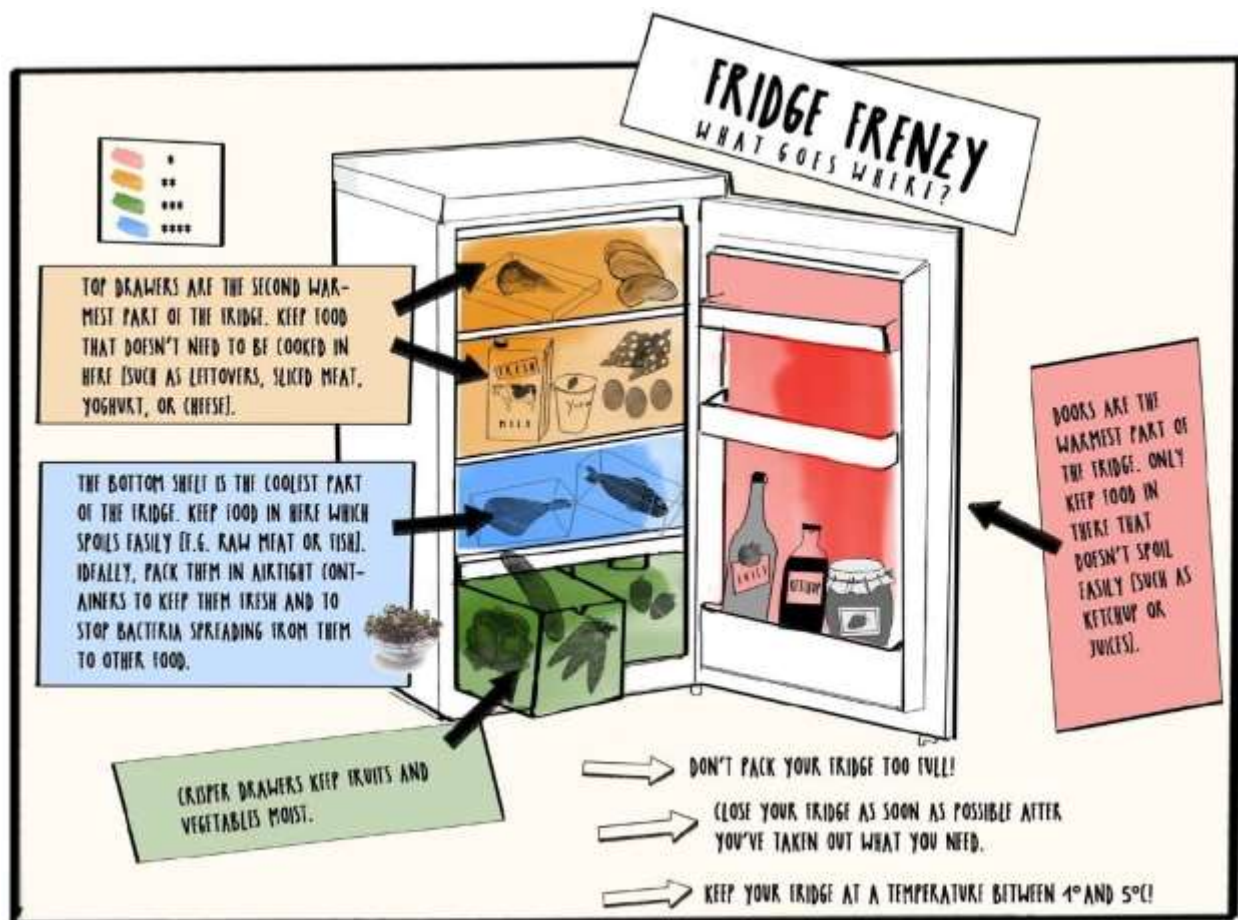


Figure 3 Courtesy: "Education Materials." Food and Agriculture Organization of the United Nations, [www.fao.org/save-food/resources/education-materials/en/](http://www.fao.org/save-food/resources/education-materials/en/)

## Humidity

If you see condensation, it may mean that the humidity is too high. Adjust the temperature and try placing a dry paper towel at the bottom of the container.

It will soak up the excess moisture and extend the life of your microgreens.

If you notice the microgreens are drying out (low humidity), add a moistened paper towel to the container.

For best results you want to maintain the temperature of your fridge between 35-40° F (1.66 to 4.44° C.). Do not put the microgreens in the freezer.

Several studies have shown that shelf life averaged 14 days for arugula and red cabbage, and 21 days for radish when stored at 4°C.

## Light

One [study](#) I came across showed that light exposure increased senescence. So, remember to:

- Store microgreens on the bottom shelf of your fridge away from light.
- Store in a container that does not allow direct light in.

Do not put them in the vegetable drawer.

## Avoid Waste: “Feed yourself, don’t feed the bin”

[Forty percent of food in the United States today goes uneaten.](#)

Reducing food losses by just 15 percent would be enough food to feed over 25 million Americans every year when one in six Americans lack a secure supply of food to their tables.



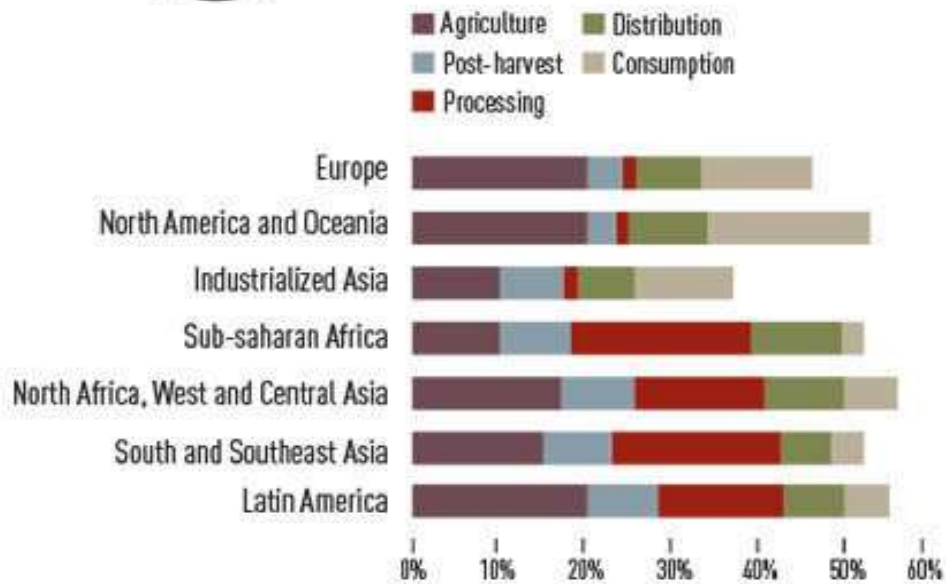
# 45%

## FRUIT & VEGETABLES FOOD LOSSES

Along with roots and tubers, fruit and vegetables have the highest wastage rates of any food products; almost half of all the fruit and vegetables produced are wasted.



3.7 trillion apples



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Figure 4: Courtesy: Food and Agricultural Organization of the United Nations, "Feed yourself, don't feed the bin: nine easy tips to reduce food waste" [http://www.fao.org/uploads/pics/fruit\\_en\\_02.jpg](http://www.fao.org/uploads/pics/fruit_en_02.jpg)

So, don't buy too much microgreens at one time. If you must store them, know that beyond 7-10 days nutritional value diminishes.

If you buy your microgreens in clamshells, keep them in that container. If you buy them in bags, be careful to not crush them with other items in the fridge, and keep the bag sealed up. Expect them to last about a week.

If you grow your microgreens, follow my tips.

There are several microgreens that you should try, either buy or grow: *pea shoots, Bok choy, purple cabbage, purple mustard, purple and pink radish, basil, corn shoots, amaranth and swiss chard.*

How long can you store microgreens at home?

Without refrigeration, they last one to two days.

Our radish microgreens lasted about 14 days in the fridge before we had to compost them. Broccoli was about 10 days.

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I've learned a lot about microgreens, how good they are for you, and what you can do with them. Check out my guide, "[The Beginner's Nutritional Guide to Incredible Microgreens.](#)"



## **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!