

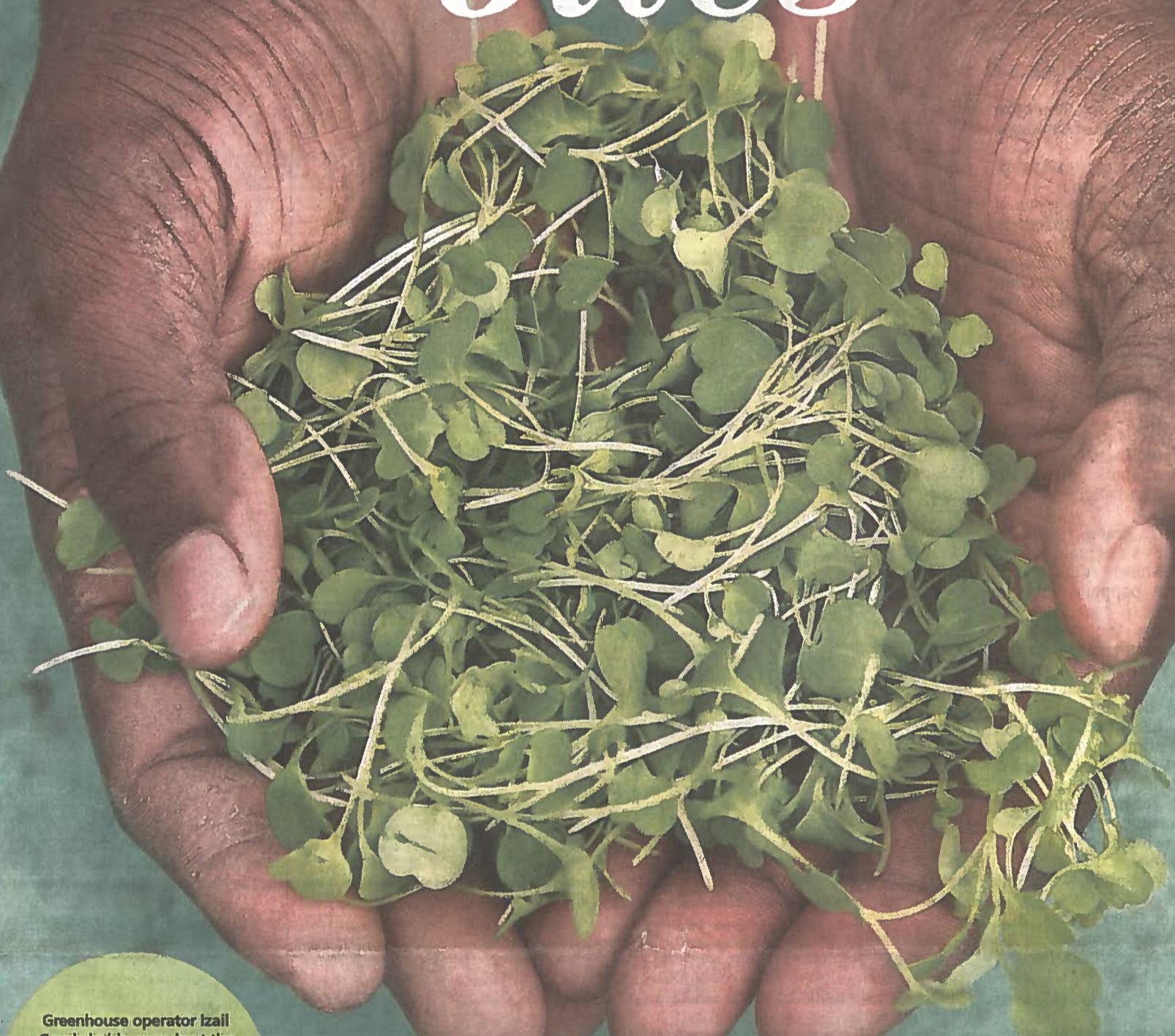


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Greenhouse operator Izail Gandy holds arugula at the Phoenix greenhouse where Arizona Microgreens grows its microgreens.

DAVID WALLACE/THE REPUBLIC

It's time to get acquainted with delicious, nutritious microgreens

JENNIFER MCCLELLAN THE REPUBLIC | AZCENTRAL.COM

What are microgreens?

They are those flower-looking garnishes piled on your roast salmon. They're the tiny greens tossed atop pizza, inside sandwiches and within salads. They're bigger than sprouts but smaller than baby greens.

If they're served to you at a restaurant, don't brush them aside. You're supposed to eat them. And they're actually delicious.

Microgreens are a delicate and nutritious food

that's slowly moving from esoteric culinary circles to mainstream diners' plates.

In Phoenix, one company holds much of the responsibility for introducing laymen to the diminutive vegetables.

Arizona Microgreens is run by two hipster brothers, Joseph Martinez, 28, and David Redwood, 35. The business has elements of things held dear by the

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younger generation. It's local, progressive and socially conscious. It's so intrinsically Millennial, there are three types of La Croix sparkling water in the company refrigerator.

In the span of a few years, Martinez and Redwood have taken Arizona Microgreens from a 200-square-foot greenhouse next to a vegan restaurant in Cave Creek to a farm that produces about 500 pounds per week. They sell their microgreens directly to consumers at a handful of farmers markets around the Valley. They're also used at restaurants such as Binkley's, Cartwright's, House of Tricks and Cafe Monarch.

"People have this perception that microgreens can only be used as a culinary garnish to give a dish some swoosh," said Martinez, who has been growing them since 2013. "That is not so. Normal folk use it in their diets."

So how are you supposed to eat them?

Microgreens might just be the easiest food you've ever come across.

First off, they're eaten raw. So, there goes the whole cooking part of the equation.

Secondly, they require minimal preparation. They're small enough — and photogenic enough — that you don't need to cut them. Forget having to chiffonade herbs or chop vegetables.

Plus, Martinez said, his microgreens are grown in such a clean and controlled environment that you don't even have to wash them.

"They don't have to be intimidating," he said. In fact, he added, cooking with potatoes is more laborious than microgreens because you have to peel, cut and cook them.

Arizona Microgreens grows more than two dozen types, including micro kale, micro basil, pea shoots, bull's blood beets, micro broccoli and micro red cabbage.

Micro onion are thin green strips with a buttery flavor that's softer than a full-grown white onion. Micro radish, on the other hand, pack a peppery, intense punch.

Popcorn shoots are the "weirdest" things they grow and a point of pride, Martinez said. They are micro corn and they are lean, yellow sprigs that taste of sugar and linger on the palate.

Pea tendrils are his favorite. "It's so dramatic," he said, admiring the plant's curly growths that mimic calligraphy. They started growing these because chefs were asking for something that held up to intense heat.

The farm's best-selling varieties are a combination of different microgreens. Labeled and sold as "mixes," the top three are:



Brothers and Arizona Microgreens co-owners David Redwood (left) and Joseph Martinez look on at the Phoenix greenhouse where Arizona Microgreens grows its microgreens. DAVID WALLACE/THE REPUBLIC

» The micro mix (beet, cross, dill, mustard, cabbage and radish).

» The micro salad mix (sunflower, pea shoot, radish and basil).

» The wellness mix (broccoli, cabbage and kale).

Arizona Microgreens sells products in three sizes at farmers markets. Small containers are \$5, medium are \$10 and a large microgreen salad is \$15. They also have a "farmers market special," \$20 for a medium mix and a large salad (a \$5 value); this is about a week's worth of microgreens for one person, according to Martinez.

Aside from eating them on their own, microgreens can be put on eggs, bagels with cream cheese, sandwiches, wraps, tacos, pizza and salads. You can use them to make smoothies, dressings and dips.

However you use them, "one thing is for sure, people like food that tastes good and people like food that's fresh," Redwood said.

Don't dare call them sprouts

Microgreens can be confused with sprouts, but the two are not the same thing.

"Whatever you do, there's probably a thing that haunts you, a perception, that hurts you in our soul. For me, that's sprouts," Martinez said.

Microgreens are more developed than sprouts. They're grown in soil with sunlight for two to three weeks, and then harvested by cutting the leaf and stem from the root. Sprouts are germinated seeds that have been soaked in water. They're usually only a few days old.

The distinction is more than superficial. It's important for food safety.

Sprouts have been linked to outbreaks of foodborne illness 30 times since 1996, according to the U.S. Department of Health and Human Services. The warm, humid conditions that beget sprouts are the same that grow bacteria such as salmonella, listeria, and E. coli. The risks with sprouts are such that the U.S. government recommends that children, the elderly, pregnant women and people with weakened immune systems avoid eating raw sprouts of any kind.

Since microgreens are grown in soil, exposed to sun and are kept relatively dry, they have less risk for foodborne illness and are safer to eat.

Microgreens have tons of vitamins

Microgreens are potentially more nutritious than full-grown vegetables. But eating a handful of microgreens doesn't mean you can stop eating broccoli.

They are not billed as a replacement to full-grown vegetables. They're not as filling or fiber-packed. But they're an easy way to significantly increase the vitamins in your diet.

In general, microgreens are more nutrient-dense than their mature counterparts.

Research published in the *Journal of Agricultural and Food Chemistry* found that microgreens had four to six times more nutrients.

» Red cabbage microgreens had the highest concentration of Vitamin C.

» Cilantro was the best for beta carotene.

» Garnet amaranth topped out for Vitamin K.

» Green daikon radish had the most Vitamin E.

How does your (microgreen) garden grow?

In a word: quickly.

The entire lifecycle of Arizona Microgreens' varieties is about two to three weeks, according to Martinez. Seeds are planted in rows of soil inside garden flats like the kind you see at home improvement stores. The flats are stacked on rows of metal bunk-beds by the dozens. Temperatures in the greenhouse range from 60 to 85 degrees. Passive heating and cooling is used most of the year, with evaporative cooling or propane heaters kicking in during the hot and cold months.

The whole process takes place inside a greenhouse at George B. Brooks Sr. Community School, a former elementary school the Roosevelt School District turned into an extended-learning facility in south Phoenix.

It's a mutually beneficial arrangement. For the district, the space is "no longer a money pit," Martinez said, and for his company, "it's a lot cooler to be sending our monthly rent to a school district that's doing good things than a bank."

Almost nothing wasted

Arizona Microgreens produces very little food waste.

Since only the tops of the greens are sold, that leaves part of the plant, the roots and the soil as leftovers. Instead of sending that part to landfill, the brothers compost it behind the greenhouse on an old basketball court.

The process is rapid (and somehow has no bad smell or bugs), producing rich compost in about a week. They donate that compost to Tiger Mountain Foundation, which sells locally grown food through a name-your-price model at farmers markets across Phoenix. The foundation's headquarters are on the Brooks campus too.

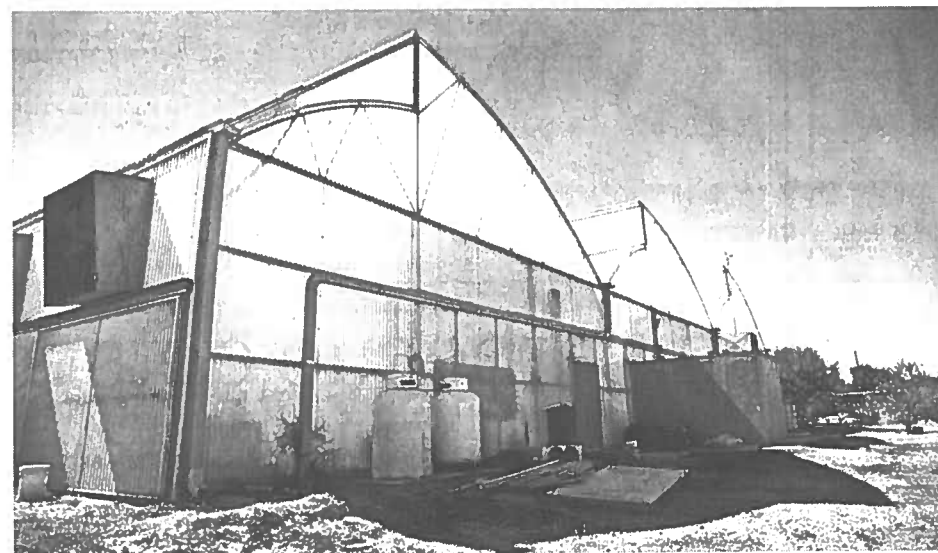
"We are proud that all of what we produce stays within the state of Arizona," Martinez said.

Blogger Cara Carin of Cara's Kitchen shared four recipes with us to show just how easy it is to use microgreens in your everyday cooking.

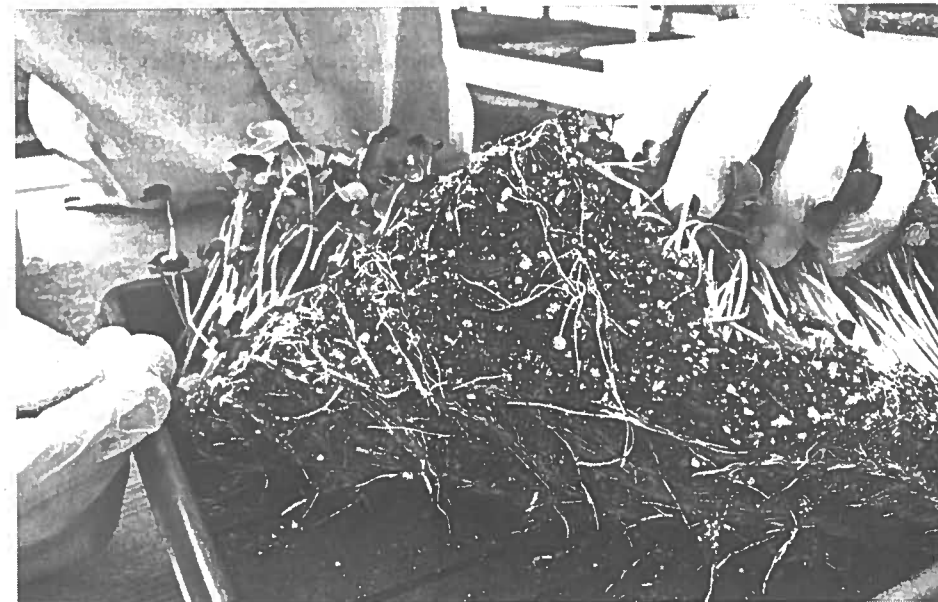
Reach the reporter at jennifer.mcclellan@arizonarepublic.com or 602-444-8546.



Joseph Martinez cuts Sango radish at the Phoenix greenhouse where Arizona Microgreens grows its microgreens. DAVID WALLACE/THE REPUBLIC



Arizona Microgreens' greenhouse is in Phoenix. DAVID WALLACE/THE REPUBLIC



Joseph Martinez, co-owner of Arizona Microgreens, shows the soil and roots of bull's blood beets microgreens from Arizona Microgreens. JENNIFER MCCELLELLAN/THE REPUBLIC

Micro

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Sunflower Shoot Dressing

Servings: 4.

- 3 cups sunflower shoots
- Juice from 2 limes
- ½ cup olive oil
- ½ cup pine nuts
- 1 teaspoon nutritional yeast
- 2 garlic cloves
- Salt to taste
- Red pepper flakes, for garnish

Blend everything except the red pepper flakes in a high-speed blender until smooth. The dressing can be used on salads, on grilled chicken or as a dip for vegetables.

FROM CARA CARIN OF CARA'S KITCHEN

Chickpea and Sunflower Shoot Wrap

Servings: 2.

For the chickpea salad:

- 1 15-ounce can of chickpeas, drained (about 1½ cups)
- 1 teaspoon Dijon mustard
- 2 tablespoons tahini
- 1 garlic clove
- 1 teaspoon capers
- 2 scallions, chopped
- Juice of 1 large lemon
- ½ cup cilantro
- 1 tablespoon fresh basil
- Pink salt and pepper to taste

Wrap Ingredients:

- Mayonnaise to taste
- 2 pieces lavash bread
- Big handful sunflower shoots
- Small handful micro mix
- Fresh lemon juice to taste
- Basil
- Salt and pepper to taste
- Sunflower Shoot Dressing dip (see recipe)

Combine chickpea salad ingredients and pulse in a



Sunflower shoot dressing from Cara Carin of Cara's Kitchen. PHOTOS COURTESY OF ARIZONA MICROGREENS



Chickpea and sunflower shoot wrap.

food processor. You want it to be cohesive but still chunky. To assemble the wraps: Spread mayonnaise on two pieces of lavash bread. Divide chickpea salad between the two pieces of bread and then

add the sunflower shoots, micro mix, lemon juice and fresh basil. Season with salt and pepper. Wrap ingredients up and serve with Sunflower Shoot Dressing to dip.

FROM CARA CARIN OF CARA'S KITCHEN



Microgreen salad with almond butter dressing.

Microgreen Salad with Almond Butter Dressing

Servings: 1.

- 4-5 handfuls micro salad
- ½ cup almond butter dressing,

Almond Butter Dressing

Servings: 4.

- ½ cup smooth almond butter
- ¼ cup tamari
- 1 teaspoon fresh grated ginger
- 1 garlic clove
- ¼ cup lime juice

- recipe above
- ½ cup chickpeas, drained
- 1-2 tablespoons sweet chili oil, optional
- ¼ cup cucumbers, sliced
- ¼ cup grapes, sliced in half
- ½ avocado, sliced

Toss the greens with the dressing. Toss the chickpeas in the chili oil, if desired. Add the chickpeas, cucumbers, grapes and avocado to micro salad.

FROM CARA CARIN OF CARA'S KITCHEN

- 2 teaspoons sesame oil
- 1 tablespoon maple syrup
- ¼ cup water to thin

Blend all dressing ingredients in a high-speed blender until smooth.

FROM CARA CARIN OF CARA'S KITCHEN