JCONLINE.COM

JOURNAL & COURIER

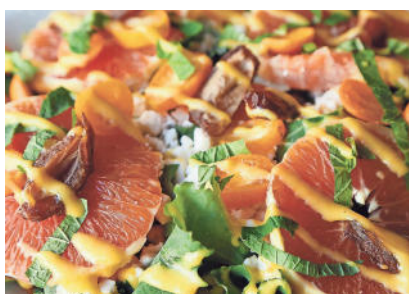
SUNDAY 03.06.16 || LAFAYETTE – WEST LAFAYETTE || PART OF THE USA TODAY NETWORK

Winter vegetables

PHOTOS BY JOHN TERHUNE/JOURNAL & COURIER

Above, Becky Brubaker display fresh carrots, radishes and salad radishes. Below left, Nate Parks pulls back a row cover to look at spinach growing in a high tower. Below middle, kumquat salad at Restauration. Below right, lettuce seedlings at Silverthorn Farm.

Sweet season



Extending the production cycle of locally grown food results in yearlong harvests with varied flavor profiles

Domenica Bongiovanni dbongiovan@jconline.com

Ever bitten into a salad turnip, carrot or spinach leaf in early February, just after it was plucked from the Indiana ground? • The sweetness in each bursts through first, followed by the crop's own distinctive notes. • Even if your taste buds have previously labored under a difficult relationship with vegetables, they'll be hard-pressed to not be thrilled by the flavors that pop through whether you eat them fresh, in a creamy aioli, smooth puree or citrus-drenched salad. • Season extension deserves the thanks for this. • The practice begins in winter to produce a spring harvest and stretches the season out so fresh vegetables can be planted in the fall and pulled from the ground in the coldest months. Similar temperatures during spring and fall allow plants like kale, arugula and carrots to be planted during both times. **See PRODUCE, Page 4A**

HIGH TUNNELS VS. GREENHOUSES

Both high tunnels and greenhouses provide protection from the weather and maintain a more controlled temperature for what's growing inside the structure.

High tunnels rely on daylight and trap the sun's radiation inside the structure. At night, farmers cover rows with Reemay to hold in the soil's heat and prevent freezing. These structures are best for heartier vegetables because the overall temperature is colder inside.

Greenhouses also use the sun's rays but are heated by other mechanisms, sealed tight, and cost more to build and operate. They also are more expensive to construct and maintain.

Low tunnels are close to the ground, less expensive, unheated and also provide frost protection to rows of crops.

Brews, 10 other signs the city's OK

Great article in the March issue of The Atlantic magazine that just begs Greater Lafayette to check itself in the mirror.

The headline: "Eleven Signs a City Will Succeed."

Below it, James Fallows, a national correspondent for The Atlantic and a former speechwriter for President Jimmy Carter, set down a check list of common denominators he and his wife, Deb, calculated during three years of visiting towns and cities that were figuring things out in flyover country.

DAVE BANGERT
@DAVEBANGERT

In a thumbnail, here's the post-recession thesis of his accompanying essay, "How America is Putting Itself Back Together:"

Starting in early 2013, Fallows spent 10 to 14 days in some two dozen towns and cities, with shorter stays in another two dozen, flying to each in the couples' Cirrus SR22, a single-engine propeller airplane. They culled through hundreds of suggestions and invitations, focusing mainly on towns and cities that were rebounding from various hardships, whether economic, political or environmental. Places like Duluth, Minnesota; like Sioux Falls, South Dakota; like Holland, Michigan; and bigger, yet still out of the way, cities like Columbus, Ohio.

Fallows went searching outside places that benefited from the "big sort" — "the idea that if you have first-rate abilities and more than middling ambitions, you'll need to end up in one of a handful of talent destinations," generally in Washington, D.C., New York City or Silicon Valley. The sort, Fallows concluded, is for real.

"But nearly everywhere we went we were surprised by evidence of a different flow: of people with first-rate talents and ambitions who decided that someplace other than the big-

See CITY, Page 8A

USA TODAY

EASY VICTORY FOR CRUZ
Kansas voters turned out in full force for the GOP caucus. **USA TODAY, 1B**

JCONLINE.COM @JCONLINE FACEBOOK.COM/JOURNALANDCOURIER

$2.00 RETAIL

Volume 98, Number 66

0 40901 04802 2

PHOTOS BY JOHN TERHUNE/JOURNAL & COURIER

Chef Alex Hernandez prepares a kumquat salad in the kitchen of Restauration, in downtown Lafayette. A special menu item, the kumquat salad features kumquats, fresh kale, mixed greens, cara cara oranges, dates, fresh mint, feta cheese and a honey lime kumquat vinaigrette.

PRODUCE

Continued from Page 1A

Of course, crops need some help.

Heated basements can be the first home for tender tomato seedlings that are eventually moved outdoors. Protected structures like high tunnels and greenhouses can control temperatures for cold-hardy spinach and carrots.

Although season extension is not a new practice, winter vegetable production is coming more into focus as the cultural and social tide continues its shift toward fresh, local food. Crop varieties are expanding as consumer demand increases and growers find creative solutions.

"Sometimes it's as simple as seeing different varieties at the market that wouldn't (have been) there a couple years ago," said Alan Sternberg, executive chef of Cerulean in Indianapolis. "I can list of five or six kinds of squash I can see at the market or that farmers say they have that a couple years ago they wouldn't have (had)."

And the results are showing up on your plate.

If you've dined at establishments like Cerulean, Heirloom, Restauration and The Black Sparrow that use food grown close to home, you may well have eaten something harvested within a stone's throw of Greater Lafayette.

Winter vegetable production, of course, depends on the whims of the weather in north central Indiana and the spring, summer and fall growing seasons. Restaurant owners, managers and chefs work with farmers like Nate and Emily Parks at Silverthorn Farm in Rossville, Reuben and Becky Brubaker at The Weathered Plow in Camden, and Kevin and Tracy Cooley at Cooley Family Farm in Tippecanoe County.

Together, they roll with the inherent unpredictability of winter growth, and their creativity continues to impact where — and what — you eat.

Flank steak at Restauration is served with a pistachio and kale pesto, with roasted red peppers, spinach and prosciutto, topped with melted mozarella cheese, all on a bed of kale.

Where it starts

You've probably seen those big hooped structures as you travel Indiana highways. Called high tunnels and greenhouses, they hover over the ground in a U shape and are covered with clear plastic sheets that invite the sun's rays while holding in its warmth.

Although the structures are used year-round to control a growing environment, in the winter, they shield vegetables from bitter conditions and increase the minimum temperature. Farmers can employ either to stretch the season depending on what they want to grow and how much they're willing to spend.

High tunnels are more difficult to seal and rely only on the sun for warmth, said Petrus Langenhoven, a horticulture and hydroponic crops specialist at Purdue University. Greenhouses, on the other hand, are heated and possess increased insulation that holds temperatures steady during frigid night. Those attributes make the latter more expensive, he said.

Unheated high tunnels still can provide fresh vegetables during chilly months. The plastic covering traps the sun's radiation, which bounces around inside and echoes a greenhouse effect, Langenhoven said. He compared it to a sunroom in the winter.

At night, farmers cover the rows of crops with Reemay — a type of fabric that often includes polyester — to hold in heat that radiates out of the soil and prevent freezing, Langenhoven said. Mulch also can insulate the soil and keep in moisture, said Liz Maynard, a vegetable extension specialist and clinical engagement assistant professor in Purdue's Department of Horticultural and Landscape Architecture.

But holding the temperature steady requires watchfulness.

Even on chilly days, Kevin Cooley said he must keep an eye on the plants and make sure to remove the covers to avoid overheating the vegetables. Becky Brubaker said she sometimes opens the doors and rolls up the plastic sides of the high tunnels to let out excess heat.

Farmers employ other growing methods to fight the cold as well.

For their varieties of butterhead and Salanova lettuce, the Brubakers use a hydroponic system in their basement. They start the plants in rockwool, which acts as an insulation, before placing them in the system, where water circulates through tubes that don't contain soil.

Why so sweet?

While you might not describe the weather these vegetables survive as sweet, their taste most certainly is — much to the delight of chefs and anyone else who consumes them. The crops' heartiness and biological makeup can adapt to the cold, unlike tomatoes and other tender plants.

Among the vegetables in the Brubakers' structures are radishes, salad turnips, carrots, and spinach. The Parkses grow kale, chard, spinach and other root crops in structures while raising salad mix and arugula in a greenhouse. Asian greens, kale, bok choy, lettuce and spinach were included in the winter offerings at Cooley Family Farms, which uses high tunnels and their smaller counterparts, low tunnels.

But why are the vegetables sweeter?

It has to do with a buildup of sugars for survival.

To explain this, Maynard likens the cells in a spinach leaf to water balloons packed into a cardboard box. The water between the balloons can freeze and the plant can live as long as the substance inside the balloons doesn't freeze, she said.

See WINTER, Page 5A

COMING MONDAY

The business of winter vegetables: As the culture shifts toward fresh and local food, the winter market struggles to adjust for supply and demand. **PAGE 1A**

AT JCONLINE

Gallery: See more photos from local farms and restaurants.

PHOTOS BY JOHN TERHUNE/JOURNAL & COURIER

Becky Brubaker returns to her kitchen with a handful of fresh carrots, radishes and salad radishes in February at the Weathered Plow in Carroll County. Using high tunnels and greenhouses allows the Weathered Plow to grow vegetables much earlier and much later than the normal growing season.

WINTER

Continued from Page 4A

If the vegetables are grown in colder temperatures, they adapt the makeup of the liquid inside the balloons to build up sugars, which help resist the harsher weather, she said.

"There are also other compounds inside the plant that kind of get switched to, I would say, cold-hardy versions of the various compounds that make up the plant cells," Maynard said. "And also sometimes plants make special proteins that will protect those cells from dehydration."

Fall and spring produce determine much of the schedule, and farmers said they generally plant their winter crops in September and October, before temperatures drop too much, and harvest in December and January.

During the chilliest periods, the ground acts as what Cooley calls a living refrigerator. Maynard said the vegetables aren't growing much.

And farmers plan for that. Because the winter's lack of light causes the produce to grow more slowly, Nate Parks said waiting longer gives them more mass and therefore more financial viability for sales.

Doing more with less

Knowing their clients allows farmers to tailor what they grow, even when fewer offerings are available during colder months.

Brubaker said she raises eight types of Salanova lettuce in her basement in part because Justin Henry, who owns Heirloom with Jon Hurley, prefers smaller leaves for his dishes.

"We're just experimenting around with different varieties," Brubaker said.

Kevin Cooley said he made kale available to Kirsten Serrano — who owns Restauration and La Scala with her husband, Paco — since she requested it for a particular period of time. Although he stopped delivering several weeks ago, a few days of warmth in late February boosted kale he hadn't yet harvested to the proper size for picking. So Serrano worked it into her menu.

Butterhead lettuce grown hydroponically at the Weathered Plow February 1 in rural Carroll County.

Cooley also has grown specific types of radishes, bok choys and Asian greens for salad blends for John Olakowski, general manager of The Black Sparrow.

Other winter items used among Cerulean, the Black Sparrow, Restauration and Heirloom include turnips, spinach, microgreens, beets and carrots locally through the latter part of fall and winter.

Restaurants use the farms' slimmed-down offerings and combine them with nonlocal, seasonal ingredients. That protocol works especially well for chefs who focus on menus that change depending on what's traditionally grown during a certain time of year.

Menu planners build in flexibility through vegetable plates that accommodate what farmers have in stock. Chefs can maximize small quantities of ingredients, too. Sternberg said Cerulean's nightly amuse-bouche is an ideal vehicle for those situations.

Winter comfort on your plate

Ask restaurant owners, managers and chefs about their winter dishes, and the conversation will invariably turn to two key categories: comfort food and citrus.

Both make sense, considering the season. Heavier foods like meats and cheeses seem to settle more easily, providing a bastion against unpredictable, icy winds outside. And citrus keeps the heartier flavors from becoming overwhelming.

Menu planners account for this, knowing that the availability of fresh, local vegetables depends on the fall and winter's harshness. For example, Sternberg's menu revolves around more protein, dairy and heartier grains that he livens up with citrus.

Olakowski said The Black Sparrow focused on meats, cheeses and greens drizzled with a citrus vinaigrette.

Chefs also use what's available to plan twists on tradition. Heirloom developed a chicken pot pie with rutabaga and turnips, Henry said. A loaded, baked sunchoke accompanied a steak at the restaurant, and the vegetable — pickled — has been part of an aioli slathered on a brunch-time bison burger.

Restauration served up lasagna and substituted noodles for sheets of butternut squash, which stores particularly well, Serrano said. During the winter, restaurants often pull out local produce that has been pickled or canned when it was fresh — Olakowski mentioned using products from Indianapolis-based Fermeti Artisan.

And forget waiting till dessert to taste something sweet. Chefs take advantage of winter vegetables' sugary notes long before that.

"We do (play to sweetness) because people like sweetness," Sternberg said.

Root vegetables like carrots, he said, handle fat well and provide a warm, comforting factor. For example, Cerulean cooks winter purees with cream and few other ingredients to showcase the vegetables. He doesn't eliminate the fat, which gives it the proper texture and coats the palette.

Preparing vegetables in different ways — by pickling for example — creates completely different tastes within a single dish, he said. When their strong flavors are showcased properly, Sternberg said they can be surprising and livelier than proteins like chicken.

"Root vegetables can be kind of exciting if you treat them well and make them the star," he said.