

EXTRA!

FROM THE OLD FARMER'S ALMANAC



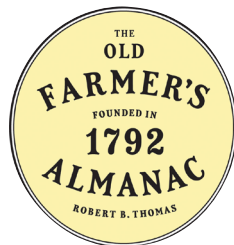
GROW AN INDOOR SALAD GARDEN

9 FACTS: MARTIN
LUTHER KING JR.

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GARDENING LUCK—
AND LESSONS

OH-SO-SWEET
SWEET POTATO
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JANUARY 2019



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JANUARY

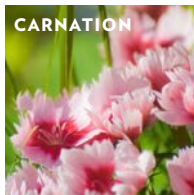
Holidays, Fun Facts, and More

ABOUT THIS MONTH

January was named for the Roman god Janus, protector of gates and doorways. Janus is depicted with two faces, one looking into the past, the other into the future.



Birthstone:
Garnet



Birth Month Flower:

Carnation or
Snowdrop



EYE ON THE SKY

MOON PHASES

- New Moon:** January 5, at 8:28 P.M. EST
First Quarter: January 14, at 1:46 A.M. EST
Full Wolf Moon: January 21, at 12:16 A.M. EST
Last Quarter: January 27, at 4:10 P.M. EST

SPECIAL EVENTS

- **Jan. 3:** Earth is at perihelion (point in a planet's orbit that is closest to the Sun) on January 3, when it will be 91,403,554 miles from the Sun.
- **Jan. 5:** Partial eclipse of the Sun; visible from North America only in westernmost Alaska.
- **Jan. 20–21:** Total eclipse of the Moon.



TAP FOR MORE ABOUT MOON PHASES



TAP FOR MORE ABOUT JANUARY'S FULL MOON

HOLIDAY HAPPENINGS

Jan. 1: New Year's Day

Jan. 6: Epiphany

Jan. 17: Benjamin Franklin's Birthday

Jan. 21: Martin Luther King Jr.'s Birthday, observed



WACKY TIMES

January: National Clean Up Your Computer Month

January: National Hot Tea Month

Jan. 1: Z Day (On this day, those whose last name begins with "Z" get to go first instead of last.)

Jan. 3: National Chocolate-Covered Cherry Day

Jan. 22: National Answer Your Cat's Question Day



RHYME TIME

*I hear you,
blithe new
year, ring out
your laughter*

*And promises
so sweet:*

*I see the
circling
months that
follow after,*

*Arm-linked,
with waltzing
feet.*

—Abba Goold Woolson,
American writer
(1838–1921)

Answer: 1.

JANUARY'S QUIZ

Which country has the New Year's tradition of people running around a house at midnight while carrying a suitcase in order to bring about travel in the coming year? (See answer below rhyme.)



1. Argentina



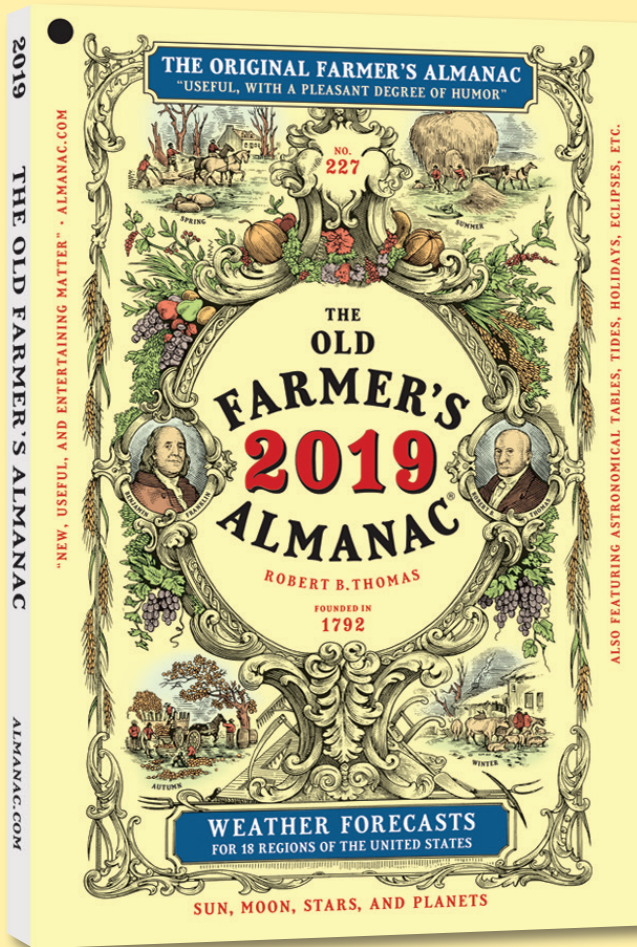
2. Poland



3. Sweden

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BEST DAYS TO DO THINGS

These January dates, deemed to be propitious in astrology, are based on the astrological passage of the Moon. However, consider all indicators before making any major decisions. —*Celeste Longacre*

ON THE FARM

Breed animals: 1, 27, 28
Castrate animals: 7–9
Cut hay: 12–14
Purchase animals: 19, 20
Set eggs: 16, 17, 25, 26
Slaughter livestock: 1, 27, 28
Wean animals: 24

AROUND THE HOUSE

Bake: 19, 20
Brew: 1, 27, 28
Can, pickle, or make sauerkraut: 1, 27, 28
Demolish: 1, 27, 28
Dry fruit/vegetables/meat: 3, 4, 29–31



End projects: 4

Lay shingles: 21, 22

Make jams/jellies: 10, 11

Paint: 15, 16, 25, 26

Start projects: 7

Wash floors: 10, 11

Wash windows: 12–14

OUTDOORS

Begin logging: 5, 6

Go camping: 2–4, 29–31

Go fishing: 5–21

Set posts or pour concrete: 5, 6

IN THE GARDEN

Destroy pests and weeds: 12–14

Graft or pollinate: 19, 20

Harvest aboveground crops: 15, 16

Harvest belowground crops: 23, 24

Mow to decrease growth: 27, 28

Mow to increase growth: 12–14

Pick fruit: 23, 24

Plant aboveground crops: 10, 11, 19, 20

Plant belowground crops: 1, 27, 28

Prune to discourage growth: 2–4, 29–31

Prune to encourage growth: 12–14

PERSONAL

Advertise to sell: 15, 16

Ask for a loan: 24, 28

Begin diet to lose weight: 24

Begin diet to gain weight: 11, 16

Buy a home: 16, 20

Color hair: 15, 16

Cut hair to discourage growth: 25, 26

Cut hair to encourage growth: 10, 11, 15, 16

Get married: 25, 26

Have dental care: 23, 24

Move (house/household): 17, 18

Perm hair: 7–9

Quit smoking: 24

Straighten hair: 2–4, 29–31

Travel for pleasure: 21, 22

Wean children: 24



GARDENING BY THE MOON'S SIGN

Use the January dates shown in the Moon's Astrological Place calendar below to find the best days for the following garden tasks:

PLANT, TRANSPLANT, AND GRAFT: Cancer, Scorpio, Pisces, or Taurus

HARVEST: Aries, Leo, Sagittarius, Gemini, or Aquarius

BUILD/FIX FENCES OR GARDEN BEDS: Capricorn

CONTROL INSECT PESTS, PLOW, AND WEED: Aries, Gemini, Leo, Sagittarius, or Aquarius

PRUNE: Aries, Leo, or Sagittarius. During a waxing Moon, pruning encourages growth; during a waning Moon, it discourages growth.

THE MOON'S ASTROLOGICAL PLACE IN JANUARY

1 Scorpio	9 Aquarius	17 Gemini	25 Libra
2 Sagittarius	10 Pisces	18 Gemini	26 Libra
3 Sagittarius	11 Pisces	19 Cancer	27 Scorpio
4 Sagittarius	12 Aries	20 Cancer	28 Scorpio
5 Capricorn	13 Aries	21 Leo	29 Sagittarius
6 Capricorn	14 Aries	22 Leo	30 Sagittarius
7 Aquarius	15 Taurus	23 Virgo	31 Sagittarius
8 Aquarius	16 Taurus	24 Virgo	



TAP FOR
MERCURY IN
RETROGRADE
DATES



APP EXTRA!
TAP FOR
JANUARY
MOON PHASES

MERCURY IN RETROGRADE

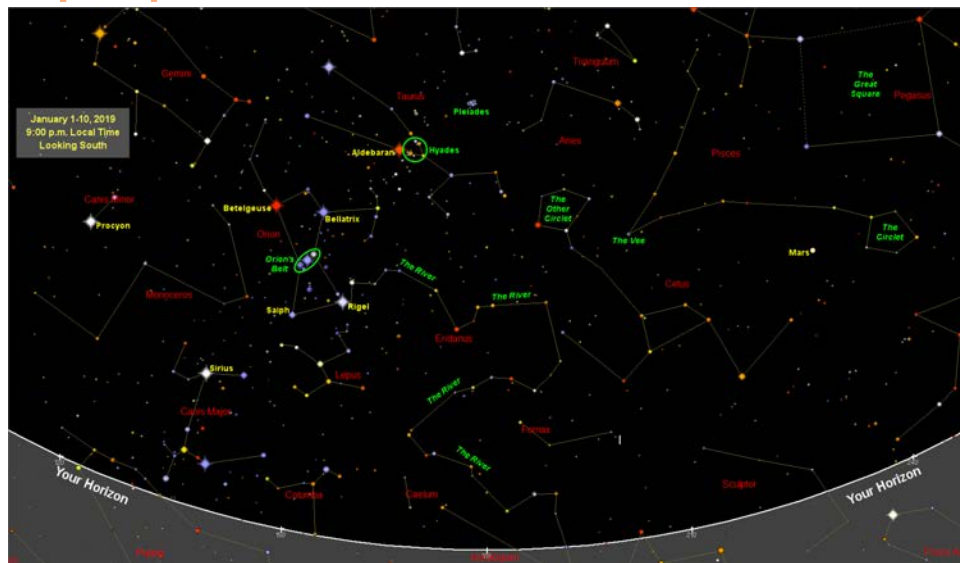
Sometimes the other planets appear to be traveling backward through the zodiac; this is an illusion. We call this illusion *retrograde motion*.

Mercury's retrograde periods can cause our plans to go awry. However, this is an excellent time to reflect on the past. Intuition is high during these periods, and coincidences can be extraordinary.

When Mercury is retrograde, remain flexible, allow extra time for travel, and avoid signing contracts. Review projects and plans at these times, but wait until Mercury is direct again to make any final decisions.

In 2019, Mercury will be retrograde during **March 5–28, July 7–August 2, and October 31–November 20.**

—Celeste Longacre



A NEW YEAR'S CELEBRATION

For Earth's Northern Hemisphere, January is typically the coldest of the 12 months. What a shame, then, that one of the best sky shows of the whole year occurs in the weeks just after New Year's Day. We need a strategy for enjoying the celestial sights of January without risking frozen fingers. The key is to break down your January sky-gazing into three or four short sessions spread across several nights.

The first 10 days of January are an ideal time to give this technique a try. During this period, the Moon is absent in the evening when most of us do our observing, making faint stars easier to see. The air is usually quite dry, too, resulting in conditions that reveal the heavens with breathtaking clarity.

Looking south on January nights, it's hard to miss Orion, the Hunter, the brightest of all constellations. Thus, Orion is the ideal starting point for each of your New Year's sky-gazing excursions. Orion is packed with

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TAP TO GET
A PRINTABLE
JANUARY
SKY MAP

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TAP TO
FOLLOW
OHIOAN JEFF
DETRAY'S SKY
ADVENTURES



bright stars that make its human-like shape easy to spot. Four bright stars—Betelgeuse, Bellatrix, Rigel, and Saiph—mark the shoulders and knees of the Hunter, while a slanting line of three stars marks his Belt. Once you trace out the stars of Orion for the first time, you'll never have trouble spotting him again.

To Orion's lower left is the brightest of all stars, Sirius, which is known as the Dog Star; appropriately enough, it lies in the constellation Canis Major, the Greater Dog. If there is a Greater Dog, there ought to be a Lesser Dog, and there is. The first bright star to the upper left of Orion is Procyon, part of Canis Minor. Together, the two dogs help Orion to hunt down his prey.

Below Orion are two dimmer constellations that many sky-gazers never notice—but a clear January night is an opportunity to see them. The first is the compact constellation Lepus, the Hare (or Rabbit), forever being hunted by Orion and his dogs. A tougher challenge is the sprawling constellation Eridanus, the River, which meanders from Orion all the way down to the horizon. If you are far from city lights, give it a try.

To Orion's upper right, look for the reddish star Aldebaran, which represents the eye of Taurus, the Bull. Two bright star clusters reside in Taurus, a loose collection called the Hyades near Aldebaran and the very compact Pleiades, also known as the Seven Sisters. Automobile buffs may already know that the badge on the front grille of every Subaru car represents the Pleiades.

Stretched out to the right of Taurus are four well-known asterisms (unofficial star patterns). Two of them are roundish shapes known as "circlets," one in Pisces, the Fishes, and the other in Cetus, the Sea Monster. Look for the planet Mars not far from Pisces' Circlet. Pisces is also home to the distinctive Vee asterism. Above the Circlet of Pisces is the aptly named Great Square of Pegasus, which encloses a substantial area of sky that is nearly devoid of stars.

Depending on the temperature, it may take a few nights to hunt down all of these January wonders, but one of the best skies of the year makes the search well worthwhile.

—Jeff DeTray



LIVING NATURALLY

Grow an Indoor Salad Garden

Start an easy salad garden without planting a single seed! It's easy.

PHOTO: DARIA MINAEVA/SHUTTERSTOCK



Choose several fresh herbs that you use most.

Everybody needs a food garden. No matter how small your garden and meager your harvest, the fresh food that you produce there will be tasty and nutritious. It will connect you with the natural world.

Okay, maybe you don't have much or any outdoor space. Or, perhaps it's not spring and seed packets are hard to find.

But you could also start an indoor salad garden by using the

produce from your local grocery store!

STUMPS, STEMS, AND ROOTS

Begin in the produce aisle of your local supermarket. Toss in a couple of bunches of celery and a couple of heads of Romaine lettuce (or other lettuce attached to an intact base), a few small onions, and several packages of the fresh herbs that you use most: basil, oregano, mint, thyme, sage, rosemary. You'll want stems 4 to 6

inches long.

Head for the organic section to collect a couple of sweet potatoes, a few beets, a few large radishes, and a few unwaxed turnips. Why organic? You'll want your roots to sprout, and many conventionally grown root vegetables have been sprayed to prevent sprouting.

These vegetables comprise your garden starters. The cost is negligible, because you get to eat a lot of what you've bought.



There is an endless variety of plant container options.

GARDENING SUPPLIES

You'll also need:

- *Containers for your plants.* Your imagination is the limiting factor here. The only requirements for a good plant container: It must hold soil, drain well, and have contained no toxic or hazardous materials. Coffee cans, plastic buckets, galvanized tubs, all with drainage holes punched into the bottom and sides; clay pots of any size or shape; burlap bags; wooden

crates; polypropylene shopping bags; sandbags; window boxes; cut-away soda bottles; a length of PVC pipe with planting holes cut out; pieces of roof gutter with holes drilled in the bottom.

- *A bag of sterile potting soil.* Don't use ordinary topsoil. It's too heavy for indoor plantings and may contain weed seeds, spores of plant diseases, and insect pests.

- *Some form of liquid fertilizer.* You can find many complete liquid

fertilizers at garden centers (and even make your own). I use a commercial product containing a mixture of fish emulsion and seaweed extract. (It's very smelly, but the smell dissipates within a few hours.) Use any fertilizer according to package directions.

- *Sunny windowsills or a full-spectrum fluorescent light fixture or two.*

Although leafy crops don't need as much sun as those that flower and fruit, your growing crops will



You can grow celery and lettuce from their stumps.

still need a few hours of sunlight each day. Indoor growers have developed some truly ingenious ways to make the most of what light they have.

- *A watering can and maybe a plant mister.* You can even make your own waterer from a plastic jug. A repurposed spray bottle or one from the dollar store will work fine for misting.

GROWING SALADS AND SOUP GREENS

- *Celery from a stump:* Just cut the bottom 2 inches from a bunch

of celery (refrigerate the stalks for later use) and “plant” it, root side down, in a saucer of water or an inch or two or pot of moist sand or potting soil. Leaves, then tender stalks will slowly emerge from the center. When the stump is well rooted, transplant it into a larger pot. You’ll be able to harvest tender stems and leaves for soups and salads for many months.

- *Romaine or other lettuce from a stump:* Follow the same procedure as for celery. Pick the outer leaves as they mature,

leaving new leaves to grow from the center.

- *Clone new basil, sage, mint, thyme, oregano, or rosemary plants:* Remove lower leaves from the stems of fresh herbs and set the stems in water. Keep the water fresh. Once your stem has a good set of roots, you can plant it in potting soil in a suitable container. Keep the plants growing in a sunny windowsill or under a full-spectrum fluorescent. Trim “branches” as needed to clone new plants.
- *Sweet potato foliage:*



Sweet potato foliage makes for a gorgeous vining houseplant.

Unless you often shop at ethnic supermarkets or do a lot of Asian-style cooking, you may not know that sweet potato foliage is edible, tasty, nutritious—and makes a gorgeous, irrepressibly vining houseplant. *Note: Don't try this with regular potatoes, whose sprouts and leaves are poisonous.* Slice the sweet potato root in half or leave it whole. Use the toothpick method to suspend your sweet potato in a jar of water with the cut side under water until it begins rooting and sprouting. Each little “eye” above the water level will grow a new slip that you can remove and

place in water to root. You can even grow tubers from your rooted slips in a large polypropylene shopping bag or other suitable container if you have enough space.

• **For fresh green onions:** Cut a bit of the root ends from cooking onions (leaving an inch or so of flesh) or from a bunch of scallions and plant them in a pot of moist growing medium. You can even plant a whole cooking onion that's begun to sprout. Trim blades for use as the new scallions reach harvestable size.

• **To grow beet, radish, or turnip greens:** Follow steps similar to those outlined for sweet

potatoes. You can use the toothpick-suspension method or plant your cut roots in a large, shallow bowl with water and clean sand or some small rocks. Remove the largest outer leaves (if any), cut off about a third of the root, and set the flat cut end in the bowl. Once each root grows a healthy set of roots and leaves, plant it in a container of potting soil. As the new plant grows, harvest the outer leaves for salads or cooking; leave the center leaves to grow.

—Margaret Boyles



TAP TO READ MORE OF MARGARET BOYLES'S POSTS IN HER “LIVING NATURALLY” BLOG



Oh-So-Sweet Sweet Potato Recipes

Sweet potatoes are versatile, nutritious, and low in calories, making for the perfect addition to any meal. We've gathered some delicious recipes to incorporate them into a curry, casserole, and pound cake.

FOOD

 TAP FOR
RECIPE

Sweet Potato Lentil Coconut Curry

PHOTO: BECKY LUIGART-STAYNER

SWEET POTATO LENTIL COCONUT CURRY

- 2 teaspoons coconut oil
- 5 cloves garlic, minced
- 1/2 medium onion, diced
- 1 cup diced tomatoes
- 2 tablespoons minced fresh ginger or 1 teaspoon ground ginger
- 1 teaspoon curry powder
- 1/2 teaspoon turmeric
- 1/2 teaspoon cayenne powder
- 5 cups peeled and diced sweet potato
- 1 can (15 ounces) full-fat coconut milk
- 3 tablespoons red curry paste
- 1 tablespoon coconut sugar or brown sugar
- 2 cups cooked red lentils
- 3 tablespoons chopped cilantro, plus more for garnish
- salt, to taste

SHARE
THIS
RECIPE

In a pan, melt coconut oil over medium heat. Add garlic, onions, tomatoes, and ginger. Cook for 5 to 6 minutes, or until fragrant and translucent.

Sprinkle curry powder, turmeric, and cayenne over diced sweet potatoes and toss to coat.

Pour coconut milk over tomato mixture and whisk in curry paste and sugar until smooth. Add seasoned sweet potatoes, cover, and simmer for 25 to 30 minutes, or until sweet potatoes are tender. Add lentils, remove from heat, and let stand for 10 minutes to thicken. If too thick, add water, 1 tablespoon at a time, to thin. Add cilantro and salt and adjust seasonings to taste. Garnish with cilantro.

Makes 6 to 8 servings.

FOOD



TAP FOR
RECIPE



Sweet Potato and Sausage Casserole

PHOTO: MARE-ANNE JARVELA

SWEET POTATO AND SAUSAGE CASSEROLE

- 6 large sweet potatoes, peeled and quartered
- butter, to taste
- salt and freshly ground black pepper, to taste
- 1 pound Italian sweet sausage, casings removed
- 2 cups fresh mushrooms, diced
- 1 sweet onion, diced
- 4 apples, peeled, cored, and thinly sliced
- 1 cup shredded cheddar cheese

Preheat oven to 350°F. Grease a 13x9-inch baking dish.

Put sweet potatoes into a pot, cover with water, and bring to a boil. Reduce heat and simmer for 20 minutes, or until potatoes are fork-tender. Drain, then add butter and salt and pepper. Mash sweet potatoes and set aside.

In a skillet over medium heat, break up sausage and cook until no longer pink. Drain fat, reserving 2 tablespoons. Transfer sausage to a bowl. Return skillet to heat, add reserved fat, mushrooms, and onions, and cook until onions are soft.

In prepared baking dish, layer half of the sweet potato mixture, half of the sausage, and all apple slices. Repeat (ending with sausage). Bake uncovered for 35 minutes. Sprinkle cheese over top and bake for 10 minutes more.

Makes 6 to 8 servings.

SHARE
THIS
RECIPE

 TAP FOR
RECIPE

Pecan-Crusted Sweet Potato Pound Cake

PECAN-CRUSTED SWEET POTATO POUND CAKE

- | | |
|--|---|
| 1-1/2 tablespoons unsalted butter, softened, for pan | 1 teaspoon salt |
| 3/4 cup coarsely chopped pecans | 1/2 teaspoon cinnamon |
| 1 cup packed brown sugar, plus 2 tablespoons | 1/2 teaspoon nutmeg |
| 2 cups cooked sweet potatoes | 1 cup (2 sticks) unsalted butter, at room temperature |
| 1/2 cup buttermilk | 1 cup sugar |
| 3 cups all-purpose flour | 4 large eggs, at room temperature |
| 2 teaspoons baking powder | 2 teaspoons vanilla extract |
| 1 teaspoon baking soda | 2 teaspoons orange zest |



SHARE
THIS
RECIPE

Preheat oven to 350°F. Adjust oven rack to one setting below the center position, with no racks above it. Butter a 10-inch Bundt pan. Sprinkle nuts evenly around bottom of pan, then sprinkle with 2 tablespoons brown sugar.

In a food processor or blender, process sweet potatoes and buttermilk until smooth.

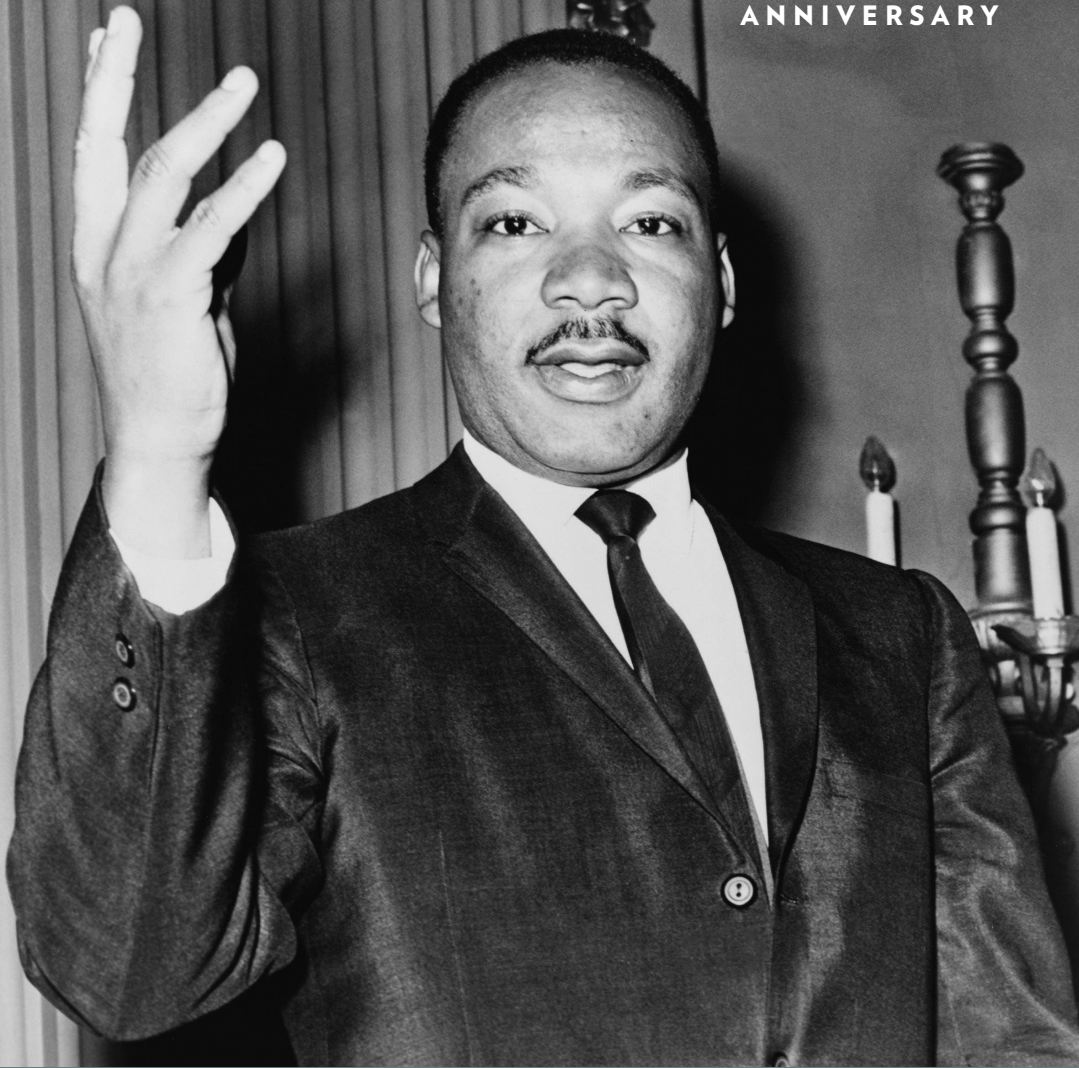
In a bowl, sift together flour, baking powder, baking soda, salt, cinnamon, and nutmeg.

In the bowl of a stand mixer, cream the butter, then gradually beat in sugar and remaining brown sugar. Add eggs, one at a time, beating well after each addition. Add vanilla and orange zest and beat to blend. Add sweet potato mixture and beat on low until evenly blended. Add flour mixture, one-third at a time, mixing well after each addition.

Pour batter into prepared pan. Bake for 60 to 70 minutes, or until a tester inserted close to the center comes out clean. Cool in the pan for 15 minutes, then invert cake onto a large platter. Cool for at least 30 minutes more before slicing.

Makes 16 servings.

ANNIVERSARY



9 Facts: Martin Luther King Jr.

The civil rights leader, born 90 years ago, is honored this month.

PHOTO: WIKIMEDIA

“I want you to know tonight, that we, as a people, will get to the Promised Land.”

■ He was born Michael King Jr. on January 15, 1929. His father, a pastor at Atlanta’s Ebenezer Baptist Church, traveled to Germany in 1934 and, inspired by Protestant Reformation leader Martin Luther, changed his name as well as that of his 5-year-old son.

■ King entered college at the age of 15. He skipped grades 9 and 12 before enrolling at Morehouse College, the alma mater of his father and maternal grandfather, in 1944.

■ Although he was the son, grandson, and great-grandson of Baptist ministers, he was considering becoming a doctor or a lawyer instead. He later decided that the Bible had “many profound truths which one cannot escape” and entered the Crozer Theological Seminary in Pennsylvania,

graduating with his PhD at the age of 25.

■ He got a C in public speaking during his first year at seminary, but by his final year, King was receiving straight A’s and had become the valedictorian of his class.

■ When he won the Nobel Peace Prize in 1964, he was the youngest person to do so, at age 35. (Malala Yousafzai now holds the record, winning the 2014 prize at age 17.)

■ His recording of “Why I Oppose the War in Vietnam” won a Grammy for Best Spoken Word Album for 1971.

■ He was jailed 29 times, often on such trumped-up charges as driving 30 miles per hour in a 25-mph zone in Alabama in 1956.

■ In a speech on April

3, 1968, he told the audience: “I’ve seen the Promised Land. I may not get there with you. But I want you to know tonight, that we, as a people, will get to the Promised Land.” He was assassinated the next day.

■ He is the only person born in the United States whose birthday is a federal holiday. (George Washington was born before the United States came to be.) In 1983, President Ronald Reagan signed a bill that named the third Monday in January as the holiday observance “Martin Luther King Jr.’s Birthday.” It took 17 years for all 50 states to recognize the holiday. The last states to officially observe it were Arizona in 1992, New Hampshire in 1999, and Utah in 2000.

—Tim Clark



Beginner's Luck— and Lessons



Plant things that you and your family like to eat.

Gardeners, no matter what their level of expertise, love to swap stories. The funny thing is that these tales almost always produce a lesson for everybody. Here are a few of our favorites, recounted by Robin Sweetser, who shares a doozy of her own.

Pat was determined to feed her family of six from the garden. She had just read the book *Five Acres and Independence* by Maurice G. Kains (Dover Publications, 1973) and was feeling inspired, so she had the whole backyard plowed up for her first garden. Unfortunately, it was

roughly the size of a football field! To cope with the vastness of this project, she said that she could never look at the whole thing at once. It was too overwhelming!

The lesson? Start small.

Chris planted a huge amount of turnips. However, as it turned out, nobody in the family liked turnips, so she had to hide them in stews and casseroles so that they wouldn't go to waste.

The lesson? Plant things that you and your family like to eat.

Eva said that since her garden was 200 feet long, she planted long, single-crop rows. Two hundred feet of beans is an awful

lot of beans! They picked as much as they could, invited the neighbors over to pick, and still had beans left on the plants. To this day, her kids hate beans!

The lesson? Stagger your planting instead of sowing all at once.

Cathy had a row of trees bordering the edge of her garden. She didn't realize until they cut the trees down how much their roots were competing with the vegetables for nutrients.

The lesson? Pick a proper site.

Sharon planted a garden at her new house. She did not realize until a towering oak tree leafed out that its crown shaded



Have a reliable source of water close to the garden.

one end of the bed.

The lesson? Locate your garden where it will get full sun all day.

Beth had a well that could barely support the needs of her household, let alone supply enough water for the garden. No one should have to choose between taking a shower or watering the tomatoes! She constructed all sorts of water-collecting contraptions but found that lugging buckets of water in hot weather wasn't any fun.

The lesson? Have a reliable source of water close to the garden.

My story has to do with growing a garden behind the house over a gravelly leach field. I planted there only because I thought that vegetable gardens belonged in the *backyard!* My side yard had beautiful, deep, sandy loam that was perfect for growing, so the next year I planted the garden there and had great success.

The lesson? Know your soil.

These folks shared other words of advice as well:

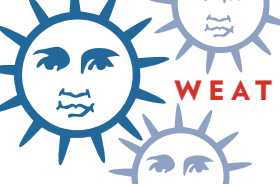
- Start simple.
- Plant what grows in your climate.
- Enjoy a few successful seasons before you try

anything exotic.

- Do not use seedy hay for mulch.
- Start a compost pile.
- Pay attention to recommended planting times for your area unless you are prepared to cover plants at night and during cold spells—or lose them!

The most important lesson we all have learned is not to let our mistakes stop us. Gardening is something that you can truly learn by doing.

TAP FOR PLANTING TIMES BASED ON FROST DATES FOR YOUR ZIP OR POSTAL CODE.



A SUMMERISH JANUARY, A WINTERISH SPRING.

HOW WE MAKE OUR PREDICTIONS

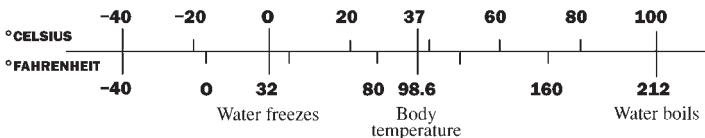
We derive our weather forecasts from a secret formula that was devised by the founder of this Almanac, Robert B. Thomas, in 1792. Thomas believed that weather on Earth was influenced by sunspots, which are magnetic storms on the surface of the Sun.

Over the years, we have refined and enhanced this formula with state-of-the-art technology and modern scientific calculations. We employ three scientific disciplines to make our long-range predictions: solar science, the study of sunspots and other solar activity; climatology, the study of prevailing weather patterns; and meteorology, the study of the atmosphere. We predict weather trends and events by comparing solar patterns and historical weather conditions with current solar activity.

Our forecasts emphasize temperature and precipitation deviations from averages, or normals. These are based on 30-year statistical averages prepared by government meteorological agencies and updated every 10 years. Most-recent tabulations span the period 1981 through 2010.

We believe that nothing in the universe happens haphazardly, that there is a cause-and-effect pattern to all phenomena. However, although neither we nor any other forecasters have as yet gained sufficient insight into the mysteries of the universe to predict the weather with total accuracy, our results are almost always very close to our traditional claim of 80 percent.

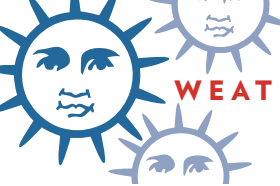
CELSIUS-FAHRENHEIT TABLE



TAP TO FIND OUT THE WEATHER HISTORY OF THE DAY

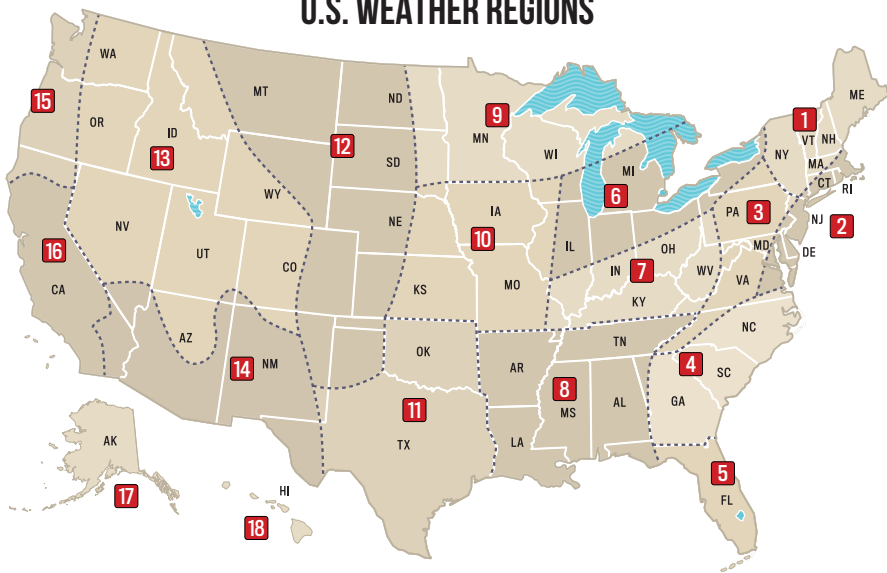


LOVE ALL THINGS WEATHER? TAP FOR THE WEATHER FOLKLORE OF THE DAY



WEATHER FORECASTS

U.S. WEATHER REGIONS

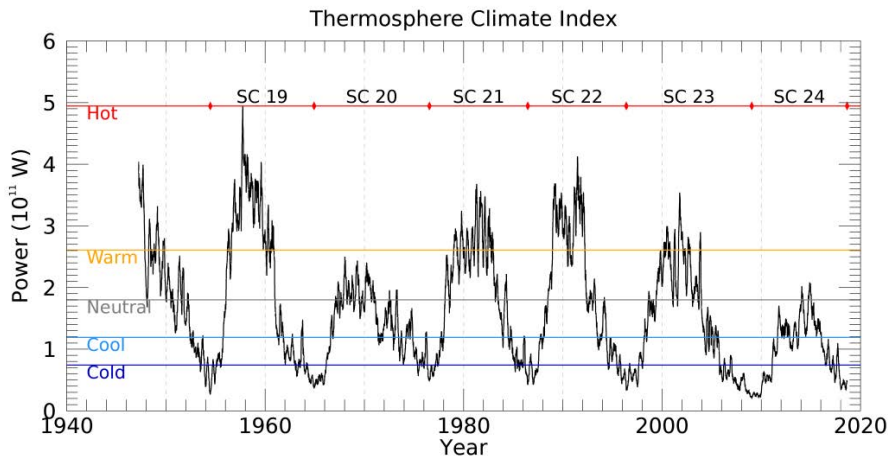


CANADIAN WEATHER REGIONS



CLICK HERE TO FIND JANUARY WEATHER PREDICTIONS FOR THE U.S. AND CANADIAN REGIONS





INSIDE THE THERMOSPHERE CLIMATE INDEX

Our long-range forecasts are based predominantly upon solar activity, with their basis being that changes in activity on the Sun directly cause changes in weather patterns on Earth. Although our seasonal forecasts have been far more accurate than any others made with a similar time frame, until recently nearly all meteorologists and climatologists have not believed that it was even possible for changes in solar output to affect Earth's weather, let alone control it to a large extent, as we believe is the case.

The reason for their skepticism has to do with the energy output from the Sun, which is known as the solar constant. Technically, it is not

really a constant—it does change significantly over billions of years. It also varies over days and years, but as these variations are a tiny fraction of its value, the scientific consensus has been that any changes in solar energy on a shorter-than-geological-era scale are much too small to have any effect on Earth's weather.

A defining feature of science that helps to make it so valuable is that as new information comes to light, scientific consensus changes, and what was once believed to be incorrect can become the new truth.

Several years ago, a research paper was published by some Russian meteorologists who believed that they had discovered and defined a



mechanism by which tiny changes in solar output could have an effect on Earth's weather. They postulated that these changes affected the top of Earth's atmosphere, an area known as the thermosphere, which was thin enough for these small changes to have an effect on it—and that these changes were then enhanced by orders of magnitude as they reflected into the troposphere, the lowest portion of the atmosphere, where our weather occurs.

Recently, others have picked up on this research, and its concepts seem to be moving into the scientific mainstream.

The SABER instrumentation aboard the TIMED satellite launched 17 years ago has provided data on the infrared emissions from carbon dioxide (CO₂) and nitric oxide (NO), two substances that play a key role in the energy balance of air in the thermosphere. By measuring the infrared glow of these molecules, SABER can assess the temperature at the very top of the atmosphere.

Martin Mlynczak, at NASA's Langley Research Center, has developed something called the Thermosphere Climate Index (TCI), which measures the temperatures at the top of Earth's atmosphere. Although SABER has been in orbit for only 17 years,

Mlynczak and his colleagues recently calculated TCI going all the way back to the 1940s. "SABER taught us to do this by revealing how TCI depends on other variables such as geomagnetic activity and the Sun's UV output—things that have been measured for decades," he explained. (See the accompanying graph of TCI data, courtesy of NASA.)

As 2019 begins, the Thermosphere Climate Index is on the verge of setting a Space Age record for cold, which reflects the historic low in solar activity in the current cycle.

So, recent data has proven that temperatures in the uppermost portion of the atmosphere vary substantially, in parallel with solar activity. Recent research proposes a mechanism by which these changes can have a significant effect on weather patterns in the lower atmosphere. While these changes in scientific consensus may not come close to the importance of the refinements of Newtonian mechanics made by Einstein early in the 20th century, they do, at the very least, add scientific credibility to the forecast methodology that we use to make your long-range forecasts here at *The Old Farmer's Almanac*.

—Michael Steinberg, Old Farmer's
Almanac meteorologist



HUMOR ME

GRINS AND GROANS FROM THE ALMANAC

LACK OF PREPARATION

Professor: "I would like a preparation of phenylisothiocyanate."

Drug clerk: "Do you mean mustard oil?"

Professor: "Yes, I can never think of that name."



HEREDITY EXPLAINED

"Do you believe in heredity?"

"I certainly do. For instance, why is my 6-month-old boy always

trying to get his toes in his mouth if it isn't because of his father's constant struggle to make ends meet?"

TRUE STORY: AN INTERESTING PROPOSITION

John Bunker and Bill Springer owned adjoining farms up New Hampshire way and were great friends until certain happenings in connection with their livestock caused much trouble and a serious feud sprang up. At the same time, some bad elements arose in town and conducted a series of kidnappings for ransom, which quite rightly struck



fear into all.

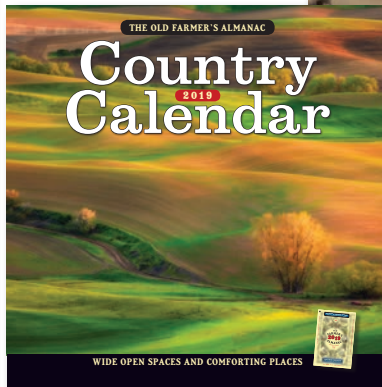
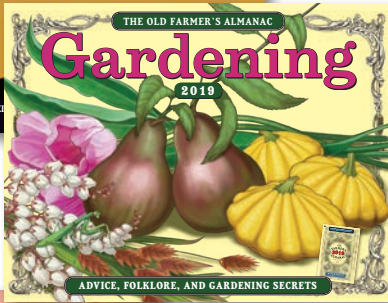
One day, Springer received a letter from the kidnapper gang, which was unaware of his estrangement from former friend Bunker: "Send us \$5,000 at once, or we shall kidnap your neighbor, John Bunker."

Springer wrote right back to the secret address given, saying, "Yours received. Sorry I haven't got that much money, but I am very much interested in your proposition."

2019 Old Farmer's Almanac Calendars

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APRIL 2019

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	<p>April Fool's Day (April 1) Easter (April 15) Good Friday (April 19) Easter Monday (April 22) April 29-30: Good Friday (April 19) Easter Monday (April 22)</p>				

Good News In the East: The sun will be visible in a clear sky on the 1st of the month. In the West: The sun will be visible in a clear sky on the 1st of the month.

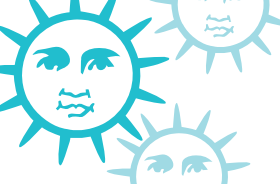
Weather Watch In the East: The sun will be visible in a clear sky on the 1st of the month. In the West: The sun will be visible in a clear sky on the 1st of the month.

Fun Facts In the East: The sun will be visible in a clear sky on the 1st of the month. In the West: The sun will be visible in a clear sky on the 1st of the month.

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CALENDAR

February name origin, birthstone and -flowers, regular and weird holidays, Eye on the Sky, Rhyme Time, Valentine's Day quiz



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Simple weight training for overall health



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CELEBRATING THE ALMANAC'S 227TH YEAR!