

# The Truth About Planting By The Moon

By: Ame Vanorio

Edited: Odette Boily



“Who does not love going out to the garden under a full moon? There’s something magical about the way the light changes the way things look. But the moon is more than just a pretty face – it has more to do with the health of your garden than you may realize. While gardening by the moon’s cycles may sound like a bit of folklore, the concept has some science behind it. Planting by the moon can actually make your plants more productive.

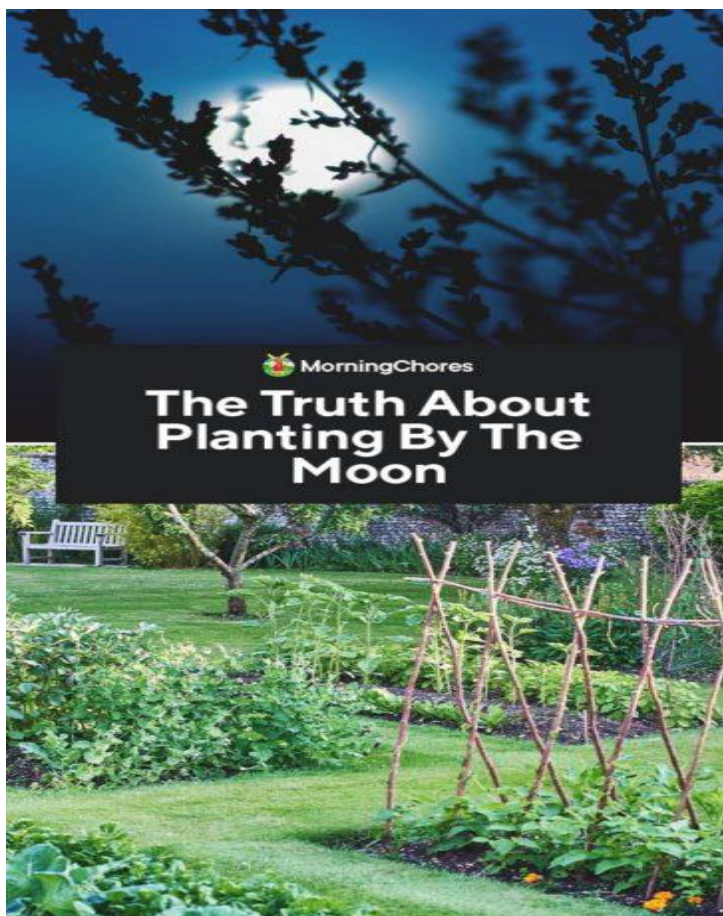
Most people plant when it is convenient, like when the weather cooperates or when the family is home and can pitch in to help. But there are advantages to planting according to the phases of the moon. When we plant this way, we take advantage of the best growing circumstances for our young seedlings. This helps us to have healthier plants that produce better.

So how does planting by the moon work? Obviously, the moon revolves around the Earth. Humans have watched this celestial phenomenon and have

categorized the moon by four cycles, each defined by the part of the moon is visible to us. That's where we get the terms full moon, first-quarter moon, new moon, and third-quarter moon. These lunar cycles have an effect on the entire planet, and that includes your garden.

The moon affects several areas of growth including the moisture level in plants and the amount of reflected sunlight they get at night, which impacts everything from the moisture in the soil, root growth, and the performance of the leaves. In addition, seeds swell and get ready to germinate during certain moon cycles.

Planting by the lunar cycles is an old tradition. In fact, the first lunar planting guide was written in the Middle Ages. Gardening by the moon has been around such a long time because it has some merit. Once you know how to do it, you can harness the power of the moon to improve your crops.



# The Science of It All



Gardening by the moon sounds like science fiction. However, there is some [real science](#) to this gardening method.”

<https://morningchores.com/planting-by-the-moon/>

## **Real Science: Moon's gravity could govern plant movement like the tides - By Jacob Aron**

“The movement of plant leaves may be partially governed by the gravitational pull of the moon, just like ocean tides.

Some plants’ leaves rise and fall during the day-night cycle, mostly in reaction to light in their environment. But plants grown in the dark have similar cycles, which hints that something else – generally accepted to be a form of internal circadian clock - may be at work as well.

<https://www.newscientist.com/article/dn14740-plants-daily-alarm-clock-discovered/>

To investigate further, Peter Barlow of the University of Bristol, UK, looked at data recorded from the 1920s onwards on the leaf movement of beans and other plants. He matched these with computer estimates of the gravitational influence of the moon at the time and location of these experiments.... generally, when the lunar tide turns, so too do the leaf movements. "You've got a zero rate of change in gravity, and that seems to be the trigger for movement in the plant's cells," he says.

Barlow also looked at data from plants on the International Space Station [ISS], and found they followed a 90 minute cycle rather than a 24 hour one. Because the ISS orbits Earth every 90 minutes, its position relative to the moon is changing on a faster cycle." Journal reference: Annals of Botany DOI: 10.1093/aob/mcv096

<https://www.newscientist.com/article/dn28051-moons-gravity-could-govern-plant-movement-like-the-tides/>

"A newly discovered family of genes acts as a plant's daily alarm, triggering a growth spurt just before dawn. By tweaking these genes, scientists may one day be able to engineer crops that grow for longer every day to produce bigger yields.

The timing of the growth spurt is known to be choreographed by the plant's circadian clock, which is reset by changes in light at dawn and dusk. The clock dictates when most physiological processes, such as the uptake of water and the breakdown of starch, happen throughout the day.

Scientists had previously found a handful of genes that set the rhythm of this clock. Now a group of biologists has found the genes that act as the plant's morning alarm, producing a flood of hormones that trigger growth at a regular time each day.

"The morning and evening light resets the plant's clock," says Todd Michael from the Salk Institute for Biological Studies. "The clock then triggers the production of these hormones." The team found the genes by taking samples from mustard plants at four-hour intervals over many different light and temperature cycles, and passing the samples over DNA microarray chips that highlight which genes in the genome are active. Overall, 71 hormone genes were being turned on in the early morning."

<https://www.newscientist.com/article/dn14740-plants-daily-alarm-clock-discovered/>

# Planting by the Phases of the Moon

“The moon has four basic phases which last about seven days each. Every month the moon goes through these four phases in a regular pattern. These phases are marked by the visible part of the moon from Earth and the moon’s brightness or dimness. We refer to this as the moon’s luminance. You most likely learned in elementary school that the tides are affected by the moon. There is a gravitational pull between the moon and the Earth. As the moon travels around our planet, it affects large bodies of water such as the oceans. This is what causes high and low tides.

The moon is the closet object to the earth with a gravitational pull. The sun also has this power, but it’s too far away to affect things like water ebb and flow. Although, when the moon and sun are on opposite sides of the earth, they have a combined pull that creates the largest tides.

The same thing happens to moisture in the soil, just on a smaller scale. Soil moisture is pulled up through the ground around the full moon. When the moon is full or new it causes a higher gravitational pull on the planet, which causes the water to rise to the surface. Scientists have tested seed emergence under different moon cycles and have shown that seeds absorb more water during a full moon.

Between the new and full stages, the moon is “waxing” or getting brighter. Then from the full moon through the last quarter the moon is “waning” or getting dimmer.

Gardening using lunar cycles tells us when it’s best to plant seeds, prune or till the soil based on the moon’s phase. Basically, above-ground crops get planted when the moon is waxing and below ground crops when it’s waning.

## New Moon or First Quarter

The new moon pulls water up in the soil. If you have just planted seeds, this will cause them to swell and burst open. This is the first step in their growth stage. The new moon is also believed to cause a balanced growth in the young plant between leaf and root development.

The best plants to put in the ground during this time include those that produce seeds that don’t form within the fruit. Think of plants like lettuce, cabbage, spinach, kale, broccoli, tomatoes, and pumpkins.

## Second Quarter Moon

During the second quarter moon, there is less gravitational pull but still lots of moonlight. This is good for leaf development. Plants that grow well at this time are those with larger leaves such as squash, melons, and beans. If you plant towards the end of this cycle and right before a full moon you will have optimum growth because the soil has more water and the moon is bright.

## Full Moon or Third Quarter



During the full moon, the light is bright and the gravitational pull is at its highest. This stage is good for the root development of plants. The best crops to plant during this time are root crops such as carrots, turnips, and beets. This is also a good time for planting bulbs and transplanting perennials.

## **Fourth Quarter Moon**

The fourth quarter is the moon's "quiet period." There's less light and a lower gravitational pull. This is considered the best time for doing garden chores. Things such as pruning, cultivating and harvesting are perfect activities during this time because the lower moisture levels mean less harm to plants.

## **Guidelines**

Does all this mean we should ignore guidelines? Absolutely not. Your climate and seasons are important factors in planning your garden. When planting by the moon, also pay attention to the Universal Time and seasons and hemispheres.