

How does gardening have an impact on you?

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Let's Garden! Gardening can provide you with the right tools to stay healthy and learn about the impacts you have on the world.

During these scary times our health is what's most important and the first step to maintaining our health is, eating healthy. We can practice eating healthy by learning about what plants provide us with the most vitamins and minerals that our body needs to stay healthy. Some plants that you can plant in your garden that are known to boost your immune system are garlic, lemon trees, and blueberries.

Not only does gardening provide a healthy choice in our diet it allows you to get outside, breath fresh air, relax, while burning a few calories. We can also protect our health by learning about where our foods come from and what impacts they have on our environment. Learning about how food is grown, processed, and transported provides us, the user, insight on how we can make healthier choices for us and our environment.

After reading this you will know some of the benefits of horticulture and some helpful tips on how to grow anything. Some specific topics that will be covered are health benefits of garlic, lemon trees, and blueberries, simple steps on how to plant and maintain them in your garden, what seasons to plant them and when they will be ready to be harvested.

So let's get to gardening!



**Immune boosting plants include: ginger, basil, tomatoes, spinach, broccoli, garlic, leafy greens, watermelons, carrots, and blueberries as well as other fruit trees such as lemon trees.*

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Gardening Benefits

Gardening has so many great benefits, not even taking into account all the types of great food you get. Gardening reduces stress, blood pressure and improves overall heart health. It is recommended that everyone should get about 30-45 minutes of physical exercise a day. Gardening creates an excellent opportunity as more times than not there is constant movement as well as moderate to heavy lifting involved which will keep your heart rate up enough to be beneficial. Depending upon where you are located, shelter-in-place directives may vary and staying indoors for too long can result in Vitamin D deficiency. Gardening presents an opportunity to get outside, while also respecting any directives that may be in place. Getting outdoors and into the sunlight increases Vitamin D consumption. Just make sure to apply sunscreen to not cause sun burns because overexposure can be harmful. It is also known to improve one's overall mood, which Vitamin D contributes to. It is perfectly acceptable if the space that you have access does not have direct sunlight or is small. You can still get Vitamin D this way just nearly as much. Any time outdoors can be beneficial as it is a potential counter measure to depression which can be caused from being indoors for too long. It also creates a place to help the bee population as well as the rest of the natural population. All plants produce some sort of flower that the bees will need. Shrubs and trees are also natural sound mufflers, helping to combat any sound pollution. With reduced sound, birds as well as other small critters will be able to find a new home. This creates another benefit in that these animals will help to remove any harmful or pestilent creatures, mainly insects which can spread disease among plants or other damages. Gardening also helps with the direct environment as well. As plants mature and become further developed, their root systems will stabilize the surrounding terrain, preventing fast pace erosion or eliminating the risk. Creating a garden can offset our carbon footprint as well, as vegetation takes carbon dioxide out of the air, expelling breathable oxygen, as well as pulling much needed nitrogen out of the air and into the soil and roots to promote healthy growth. So don't spend anymore time inside and let's get gardening.

Like all activities please be sure not to over exert yourself. If done too intensively tendonitis, carpal tunnel, and repeat motion injuries can occur. We do not want to add more stress to our already hard working medical staff. So, make sure to stretch, take breaks, and keep activities to a moderate level. Remember your sunscreen and water to keep hydrated.

Household items

Here are some items that you can use in place of traditional pots and planters, so that you can save a few dollars.

- Milk Cartons: Give the milk carton a good rinse and then turn them over to make great planter boxes.
- News paper and cardboard: This makes a great organic weed killer and natural mulch. Simply lay the newspaper around the base of the plant which will kill any weeds and promote earthworm activity.
- Egg Cartons: Egg cartons make fantastic free, biodegradable seed starting containers.
- Wire Hangers (or malleable wire): If you have a lack of space, take an unused hanger and reshape it to fit your needs. Take 2 hangers and stretch out the body of the hangers (the triangle part) and fit the hangers around the pot that you are using. The wires should make a plus sign underneath the pot. Make sure that the pot is secure by twisting the wire above the pot. Hang the pot near a window for some light.

*Other household items that you can use include: Forks and Spoons, Vinegar, Baking soda, Stocking, Pennies, Eggs shells, Tea, Epsom Salt, Coffee grounds and so much more!

Lets Garden!

Garlic Cloves:

Not only does garlic give your food great flavor but it is packed with immune boosting nutrients too. Garlic reduces cholesterol, lowers blood pressure and is packed with great antioxidants that protect against cell damage and aging. Now who isn't sold yet? Great skin and great food, I'm in!



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Where to Plant Garlic

Garlic should be planted in a spot not recently used for garlic or other plants from the onion family. Do not plant garlic in areas where water can collect around the roots, causing them to rot or become diseased.

What you will need to get started

- Garlic bulbs
- A well drained potting bed
- Compost or well-rotted manure
- Fertilizer

Directions:

1. Separate cloves
2. Space cloves 4-6” apart (cloves should be planted with the pointed end up)
3. Push each clove 1-2” in the soil and then water the bed if it is dry.
4. After planting, law down a protective mulch.

Note: In colder climates mulch should be 4” thick and in milder climates 1-2’ thick

5. When the leaves begin to sprout you must feed the garlic with a small amount of fertilizer that decomposes slowly.
6. Add a layer of water after fertilizer decomposes
7. In late spring some garlic varieties produce flower stalks that have small bulbils. Cut these stalks off
8. When the garlic plants stop producing new leaves and begin to form bulbs. At this time you will remove any remaining mulch and stop watering.
9. Harvest the garlic when the leaves have turned brown, be careful not to bruise them
10. Let the bulbs dry out for 2-3 weeks in a shady area with good circulation (move them if there is rain in the forecast)



Lemon tree planting :

How many of us like lemonade? Cause I know I do. Lemon trees provide a wealth of health benefits, food garnish, and a great tasting drink. Lemon trees provide our bodies with rich vitamin C, which helps to fight colds and flu during the winter months. It also lowers blood pressure, provides us with a healthy complexion, increases iron absorption, promotes weight loss and so much more. This

process does require a little bit of love and time (3-6 years)but the lemons are so worth the wait. Like they say when life gives you lemons make lemonade, so lets do it.

Other benefits to Citrus trees include:

- They can produce gloriously perfumed white flowers, sport glossy, green leaves and brightly coloured fruit – yellow, orange and green
- Fruit holds on the tree in good condition for many months after ripening providing long-term self-storage
- Used in foods
- Used for scents and cleaning supplies

What you will need to get started

- An organic lemon since non-organic lemons often contain non-germinating seeds
- Fertile potting soil, and natural fertilisers like compost
- A seedling pot that is about 24 inches wide by 12 inches deep
- A planting pot that is six inches wide and six inches deep (this comes in handy further down the track)
- A sunny, indoor growing location

Directions

1. Moisten the potting soil so that it is damp, but not soaked, all the way through.
2. Fill the smaller pot with soil, all the way up to an inch below the rim.
3. Cut open your lemon and remove a seed. Remove all of the pulp from its surface. A good way to do this is to simply suck on it until it is clean.
4. Do not delay planting. The seed must still be moist when it is buried into the soil in the smaller pot. Plant the seed about half an inch deep in the middle of the pot.
5. Spray the soil that is directly above the seed gently with water from a spray bottle.
6. Cover the pot with clear plastic wrap, seal the edges with a good rubber band, and poke small holes in the top with a pencil.
7. Place the pot in a warm, sunny location.
8. Spray on more water occasionally, not allowing the soil to dry out. Do not cause water to puddle though. Just keep the soil somewhat moist.

9. After about two weeks, when the sproutling emerges, take the plastic covering off. If you need additional light for your lemon plant, you can use a grow light to supplement the sun's light.
10. Take care of the young plant by keeping the soil damp, by making sure it gets at least eight full hours of light per day, and by giving it moderate doses of organic fertiliser like compost.
11. Watch over your plant to ensure it is not attacked by bugs or diseases. Prune off brown, dead leaves when necessary. Use pesticides if you must. Protect your new lemon tree!
12. When the plant outgrows its small pot, put it in the larger pot. You will go through much the same procedure when you replant it as when you first planted. Younger plants need more water than older plants, but they all do need adequate water. Don't starve your poor plant after all that work of growing it!

Time to make lemonade! Who's ready for a light snack on the side?

Blueberries



Blueberries have many health benefits including antioxidants. Antioxidants may prevent cancer, “Antioxidants are compounds that fight harmful free radicals and provide a myriad of health benefits. In fact, antioxidants not only prevent cell damage, but also protect against several types of chronic disease, including cancer, heart disease and diabetes” (Benefits of Blueberries). It is amazing that one small fruit can do so much. It was found that in a, “2007 test-tube study, that low-bush blueberry juice reduced the growth of several types of cancer, including stomach, prostate, intestine and breast cancer cells” (Benefits of Blueberries).

Blueberries have also been found to boost the immune system, which is something that we as a society have become increasingly interested in the past few months. A WebMD article states, “Blueberries may give your immune system a boost, according to a new study. Researchers found that both fruits contain compounds called stilbenoids, which work with vitamin D to increase expression of the human cathelicidin antimicrobial peptide (CAMP) gene, which is involved in immune function.” (Blueberries, Red Grapes May Boost Body's Immune Function,

2020). Blueberries have also been linked to lessening cognitive decline in older adults. There was a study that investigated, “The effect of blueberry consumption on cognitive decline and body composition in older adults with mild cognitive decline. The investigators hypothesize that participants who consume blueberries will experience an improvement in cognitive abilities, as measured by a standardized battery of tests, compared with those who consume a placebo. They may also show an increase in processing speed, an improvement in memory abilities, an improvement in body composition, and a decrease in oxidative stress and inflammation.” (Effect of Blueberries on Cognition and Body Composition in Elderly with Mild Cognitive Decline, 2015).

All of the following information on care and growing of blueberries is from the Arbor Day Foundation website, “Northern highbush blueberries are natives of North America. They are an upright bush with a relatively shallow, fibrous root system and woody canes. Fruit is borne on buds formed during the previous growing season in late summer. Highbush blueberry plants leaf, flower, and fruit in June. They are used as hedges, shrub borders, beautiful ornamentals or for wildlife.

How to Plant, Care, Prune and Harvest Blueberry Bushes

Site Selection for Blueberry Bushes

Light: Full Sun to Partial Shade

Soil: Moist, acidic, organic, well drained soil. Highbush blueberries require a soil pH of 4.0-5.2. If you do not have acidic soil, it can easily be changed by working with a local lawn and garden supply store to help lower your soil’s pH. The pH of the soil can also be lowered by adding finely ground straight elemental sulfur or elemental sulfur in pill form. Aluminum sulfate and iron sulfate are no longer recommended, because they cause plant toxicity with certain soil types. A range of 3-20 percent organic content is best. To increase the soil’s organic content, amend with organic mulch, wet peat moss, well-aged sawdust, straw or leaf litter.

Pollination: Blueberries are self-pollinating. However, cross-pollination produces a better crop, creating larger berries and larger yields. It is best to plant 2-3 types of blueberry with the same bloom time. (Note: Rubel and Bluecrop both bloom mid-season).

How to Plant Northern Highbush Blueberries

For best results, plant your blueberry bushes in early spring. Once your plants arrive, plant them immediately. If you cannot plant immediately, keep new arrivals cool and roots moist. To keep cool, it is recommended that you store in a refrigerator or cool place.

1. Unpack and Soak: Unpack your blueberry bush and soak in water for 3 to 6 hours just before planting.
2. Cut Broken Roots.
3. Dig Hole(s): The width of the hole should allow you to spread roots. If you are planting multiple blueberries, dig holes 4'-6' apart. If you are creating several rows dig holes 7'-12' apart.
4. Spread Roots in Hole
5. Shovel Dirt Back in Hole and Add Amend Soil.
6. Do Not Tap Soil: Don't step on the soil or tap it down.
7. Water: Give each plant 1"-2" of water.

How to Water Blueberries

Blueberry plants have a thread-like root mass with no root hairs. Because they have no root hairs, they are sensitive to fluctuating soil moisture. Deep, low pH mulch like peat moss, pine needles or well aged sawdust conserves water and minimizes soil water fluctuations.

Water blueberry plants during the day. Keep the soil moist but not soggy. Give them at least 1" per week during growing season and up to 4" per week during fruit ripening. Keep the soil moist to a depth of 1". Water evenly on all sides of the plant. Insufficient water when the buds start to grow in late summer and when fruit is developing the following summer can lead to smaller berries. Too much water can lead to large, bland fruit.

How to Control Weeds Around Blueberries

Weed control is essential. Eliminate weed competition prior to planting if possible. Blueberry plants are shallow rooted, so do not hoe or cultivate around the bushes deeper than 2". Pull the weeds out.

How and When to Fertilize Blueberry Bushes

Blueberries do not fertilize the first year. During the following years, fertilize with ammonium sulfate or a complete 10-10-10 fertilizer (for acid loving plants) in spring. Split the dose, one as buds open and the second a month later. Increase the amount as the plants mature. Only nitrogen

is required on an ongoing basis. Never apply nitrate containing fertilizers such as ammonium nitrate or calcium nitrate as these can be toxic to the plant.

How to Prune Blueberries

Do not prune for the first 2-3 years except to remove damaged or rubbing canes. Remove the fat fruit buds the first year to force vegetative growth and help the root system get established. Upright blueberry shrubs tend to become dense in the center causing shading.

After the third year, a mature cultivated blueberry plant has 15-18 canes which originate from the crown. Pruning controls the crop to increase fruit quality.

When the bushes are mature after several years, remove older central canes and prune inward pointing laterals back to the main cane. Prune when dormant in late winter or early spring. Fall pruning is not recommended, because the new shoots could be killed by a cold winter. If necessary, thin out the dormant fruit buds to get fewer but larger berries.

How to Protect Your Blueberries from Birds

Netting is the most effective solution to prevent birds from consuming your crop. Put it on as the fruit starts to ripen. Tie securely around the base of the plants to exclude rodents.

Blueberry Picking

These northern highbush cultivars ripen mid-season, but will not produce a crop until at least the second season.

When to pick your blueberries: Blueberries taste sweeter if left hanging on the bush to fully ripen. Pick 3-7 days after the berries turn completely blue all the way around for maximum sweetness. The stem should be blue not green or red, berry skin dull looking, and the berry detaches easily.

Refrigerating your blueberries: Refrigerate in a shallow container or freeze right after harvest. Do not wash the berries until ready to use. Refrigerated blueberries are best when used within 3-5 days, but storage life can extend 7-10 days. Blueberries will stain clothing” (arborday.org).

Arbor Day Foundation. 2020. *Blueberry Care Instructions*. [online].

Blueberries, Red Grapes May Boost Body's Immune Function. N.d. [online].

Dr. Axe. N.d.. *Benefits Of BlueWebMD*. 2020. [online].

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