



According to a study from Texas A&M University, studies show that a well mulched garden yields 50% more vegetables than an unmulched garden space.

Using mulch is good for gardening, when looking all the benefits it can have for your plants. Mulch helps to keep plant roots cooler, it also helps to hold in soil moisture which protects your plants from drying out too quickly. Mulch generally also helps to increase soils structure, fertility and helps to create good air and water movement through the soil. Leaving raw materials within the soil to supply to earthworms, they help to aerate the soil, it helps for nutrients to be released and improve upon a weak crumbly structure. It is important to know that mulching should only be from 2-4 inches in depth. There are also many types of mulch that have their own advantages and disadvantages. Some examples of some types of mulch are grass clippings, bark/wood chips, compost, decaying leaves and straw to name a few.

Different Types of Mulch

- **Greens (Grass Clippings, Weeds that have not gone to seed and Stalk)**
All greens used for mulch must be dried prior to use

Advantages: Garden greens can be collected with ease from your garden and surrounding area, easy to apply, it is especially good for vegetable gardens, they add nitrogen to the soil, represses weeds and helps to keep a hold of the soil moisture

Disadvantages: Decays quickly, If these leaves are acidic they can lower the pH of the soil, if these leaves contain seeds they can become a weed problem, it is not very attractive looking mulch for the garden and if they contain seeds they can germinate and create weeds



- **Bark/Wood Chips**

Don't use bark that is diseased

-Signals of infected bark would be discolouration of the bark (white bark)

Advantages: Bark is slow to decay and looks very neat. It is rather inexpensive in comparison to other forms of mulch and it is the best mulch to use on slope. All types of bark offer an excellent source of carbon helping to make your soil thick and dark.

Disadvantages: **Beware** of pine bark mulch as it is fairly acidic ($\text{pH} < 7$). Acidic mulch will lower the pH of your soil. The pH scale ranges from 1-14 and is a measurement of the molar concentration of hydrogen ions. Anything with a pH between 1-7 is acidic, while anything with a pH higher than 7 is basic. It should be noted that any substance with a pH of 7 is neutral in terms of its acidity (you should aim to have your soil at this level). Levels of acidity are measured using the pH scale (Power of Hydrogen). A pH of 1 is the most acidic, as you go up the pH scale, the acidity decreases. For example, a soil sample with a pH of 4 is more acidic than a soil sample with a pH of 7.



- **Compost**

Compost is organic matter that has been decomposed and recycled as a fertilizer

Advantages: It adds many important nutrients to the soil and it's free because you can make your own compost pile

Disadvantages: It is good mulch for weeds to hold on to and compost mulch can also burn plants



- **Straw, Hay and Wheat**

Advantages: These are inexpensive, they have a high concentration of magnesium (a secondary nutrient) because it is a part of the chlorophyll in all green plants and it helps to activate many plant enzymes needed for growth and easy to apply

Disadvantages: This mulch is so light that it can blow away



- **Pine Needles**

Advantages: Due to the large amount of surface area, pine needle mulch will allow water to pass through the top soil, allowing for quicker absorption of nutrients by the root system. The lush green colour of the pine needles implies a high concentration of nitrogen (the most important nutrient for plant growth). Nitrogen is a major part of chlorophyll, chlorophyll is what gives plants their vibrant green colour, it is also a key component in the process of photosynthesis aiding in the growth and sustenance of all plant life.

Disadvantages: If pine needles are continuously used as mulch, this can increase the acidity of your soil.



What Makes Good Mulch?

Whether you are buying mulch or collecting mulch to collect your own, there are certain things to take into consideration when using mulch in your garden. It is important to use organic substances in your mulch because organic substances over lots of primary, secondary and macronutrients whilst limiting the quantity of chemicals, many of which can be harmful and potentially dangerous that enter your soil. An attribute of good mulch is that it is dark in colour, the dark colour of mulch comes from manganese. Keep in mind that making an effort to buy local is a great choice because it is environmentally friendly and preservative free. An aged mulch with a fine to medium texture is very important as well as the mulch not being a source of contaminants or disease.

Pros and Cons of Mulching

Pros

- Keeps soil cool and moist in hot weather
- Keeps soil warm during the winter months
- Helps to prevent weed seeds from germinating

- Decomposes slowly (depending on the type of mulch) which helps to release nutrients into the soil
- Can improve soil fertility
- Improves soil aeration, structure and drainage
- Mulch can help with erosion control in some cases

Cons

- When it is damp, slugs and snails can stay around and eat plants that happen to be nearby
- The types of mulches vary and some can be acidic while other may not be acidic at all
- If wet mulch is near the stems of the plants, it can cause them to rot and can cause rodents to invest the area
- Organic mulch can slow down soil warming which inhibit the speed of growth for bulbs and perennials

How to apply mulch (Tips)

- Smooth out the soil
- Do not place mulch too close to the base of the plants
- Only use 3-4 inches of mulch to prevent evaporation

Is straw good mulch?

Straw is the most convenient type of mulch because if you apply it once, you won't need to apply it again for the remainder of the growing season. It is also very easy to work with because you can mold and pull it part to help customize the area around your garden but it can be difficult for working with small plants with straw mulch. There are many variations of straw such as straw from alfalfa plants, straw made from harvested cereal crops and pine straw mulch made from pine needles. First off, straw looks great for a garden which makes it a popular "go to" mulch for gardens because it gives the area around the plants a more natural look, something that dyed mulch is not able to give you. Straw is also organic because it comes naturally from harvested crops, there is also an abundance of it and it replenishes itself and it has no harmful chemicals as oppose to manufactured mulch which can contain harmful chemicals. General turf weeds thrive off of a lack of nitrogen as well as many other things but straw mulch provides nitrogen to these plants, wood mulches tend to detract/take away nitrogen from the soil. Also, straw is not to be confused with hay because straw is cut from wheat while hay is cut from grass. Special Note: Make sure the straw you are using is free of weed seeds (Oat Straw is weedy)

Are wood chips good mulch?

This is economically friendly mulch because you can get it for free from tree trimmers but wood chips can also take away from the from the nitrogen of the soil, making it acidic and in turn, lowering the soils overall Ph levels. Wood chips are especially important in retaining water and preventing weeds from growing. This organic mulch can also help to regulate the temperature of the soils surface.

Are grass clippings good mulch?

Along with wood chips, grass clippings is a mulch that you can acquire for free, it is important to let grass dry before you spread it around if not it starts to smell and decompose. It breaks down fast and they add nitrogen as they do it.

Are compost good mulch?

Compost breaks down quickly and adds to soil structure by releasing nutrients quickly for plants to absorb. It is also extremely expensive and will keep your plants healthy and in the best condition possible. It is important to always keep compost mulch away from plant tissue because that can create an area for disease and pest problems.

Special Note: Make sure the straw you are using is free of weed seeds (Oat Straw is weedy)

Difference between Straw and Hay

- Hay is cut from grass while straw is cut from wheat
- Straw is used as bedding for livestock
- Hay is used to feed farm animals and straw is used for weaving baskets and making animal beddings

View Video on [Using Mulch in Your Vegetable Garden](#) here

Courtesy of Monkeysee.com

Bibliography/References

Beginner's Guide to Mulch: Organic Gardening. (n.d.). Organic Gardening: Summer Harvest, Organic Pest Control, Weeding. Retrieved July 8, 2013, from Bruske, E. (n.d.). Beginner's Guide to Mulch: Organic Gardening. Organic Gardening: Summer Harvest, Organic Pest Control, Weeding. Retrieved July 8, 2013, from <http://www.organicgardening.com/learn-and-grow/mulch>

Frowine, S. A. (n.d.). Understanding the Benefits of Garden Mulch – For Dummies .How-To Help and Videos – For Dummies. Retrieved July 8, 2013, from <http://www.dummies.com/how-to/content/understanding-the-benefits-of-garden-mulch.html>

Klein, R. (n.d.). 7 Reasons to Use Straw as Mulch | DoItYourself.com. DIY Home Improvement Information | DoItYourself.com. Retrieved July 8, 2013, from <http://www.doityourself.com/stry/7-reasons-to-use-straw-as-mulch#b>

Kelsey, P. (n.d.). Mulch for a Healthy Garden – Fine Gardening Article. Fine Gardening: Expert garden plant advice, tips, and ideas from Fine Gardening magazine, including design, care, and how-to garden techniques.. Retrieved July 8, 2013, from <http://www.finegardening.com/how-to/articles/mulch-for-healthy-garden.aspx>

Morison, A. (n.d.). The Difference Between Hay Bales and Straw Bales. StrawBale.com. Retrieved July 8, 2013, from www.strawbale.com/straw-bale-houses-not-hay-bale-homes/

Pleasant, B. (n.d.). Get the Most From Vegetable Garden Mulches – Organic Gardening – MOTHER EARTH NEWS.Mother Earth News. Retrieved July 8, 2013, from <http://www.motheearthnews.com/organic-gardening/garden-mulches-zm0z11zhun.aspx#axzz2YStCGaFx>

Editors of Consumer Guide . “TLC “How to Mulch: Tips and Guidelines”.” TLC Gardening . N.p., n.d. Web. 9 July 2013. <<http://tlc.howstuffworks.com/home/how-to-mulch.htm>>.