

Diggin' In The Dirt: Good Mulch

By Chip Bubl

Do mulches steal nitrogen?

There is a common misconception that surface mulch ties-up soil nitrogen. This isn't true.

It is known that when you mix organic matter into the soil, which is a good thing, you can tie-up nitrogen. When you mix in organic matter that isn't completely composted already, the soil microbes get into high gear to finish the process. The soil bacteria and fungi that break organic matter down need nitrogen to build up their populations. They scavenge effectively the nitrogen in the soil solution. Your crop plants can't compete as well. So when you work two inches of organic matter in, you must add four pounds of actual nitrogen per 1000 square feet to feed both the crop and the hungry composting microorganisms. That would amount to 20 pounds of ammonium sulfate or 35 pounds of bloodmeal or 25 pounds of 16-16-16 per 1000 square feet of vegetable garden. To figure out the amount of fertilizer needed, divided 4 pounds by the percent N in the fertilizer: for ammonium sulfate (21-0-0) $4/.21 = 19$ pounds (ok, 20 is close enough). This formula can be used for organic or conventional fertilizers as long as you remember that the first number on the bag is the percentage of nitrogen.

But when you put the mulch on the surface, you don't create that same situation. Only the "face" of the mulch in contact with the soil experiences the same rapid colonization. Your crop roots are lower than this zone and are not competing for the same nitrogen. Thus there is no significant shortage with surface mulching.

That said, you still need to fertilize your crop. The winter rains wash all the nitrogen out of the soil profile and it must be replaced. You can use natural or inorganic nitrogen sources. Just make sure you use enough. A nitrogen-starved plant is light green and generally stunted. I see them all too often.

Root-bound transplants

Our unpredictable spring weather is a nightmare for nurseries that grow bedding plants. They have to be ready to provide plants if we get a warm spring but also be able to hold them until the weather improves finally in late-May (we hope).

The advice on herbaceous perennials and annuals has been to look at the roots and if they are circling, cut them to force new outward growth. This is not good advice. Evidence is that annuals and herbaceous perennials will root out into the surrounding soil without being cut. In fact, cutting seems to make the process worse. Remember

this applies to bedding plants, not woody plants. Woody plants with circling roots must be unwound or the plant can ultimately strangle itself.

Planting raspberries

Many raspberry patches have not done well the last few years. Winter rain, which fills the clay soils, caused an increase in root rot fungi. Once this disease becomes established, there will be a steady and irreversible decline in the plants.

Research carried out in Vancouver, Washington indicates that a partial solution to root rot involves building raised beds for new plantings. The beds were 10-12" high and 2-3 feet wide.

The results showed a significant decrease in root rot, even when planted to a susceptible variety like Willamette.

There are some disadvantages. First, the beds need to be maintained annually by re-working the sides and mulching. Second, the beds dry out more quickly. While this is great in the winter, it means more irrigation in the summer.

One other piece of information came out of this research. The scientists discovered that gypsum mixed into the soil also reduced root rot. Rates used were in the range of 100 pounds of gypsum per 1000 square feet of raspberry bed.

In addition, remember that the everbearing raspberries tend to be a bit more disease resistant than our standard July bearing types. Cascade Delight is said to be somewhat root rot resistant so it may be worth a try in our climate.

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Free newsletter

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Natural Path to Health: BEES, A Medical Miracle

By Dr. Carol McIntyre

Hopefully you are all aware of the fact that our bees are dying. It is yet to be determined, but I have my thoughts as to why... as I'm sure anyone else who is concerned does. We should be concerned by the way. Bees have been around for millions of years! Yet suddenly, they are dying. I am not an expert on bees. I do however have a strong passion for them. Just before I sat down to write this article I received an email from a friend, who is also passionate about bees, which included many references to different web sites. Please explore this link and learn more for yourselves: <http://www.benefits-of-honey.com/honey-bee-facts.html> (Thank you Maggie!)

It is very important that you understand the multitude of benefits bees provide. Without them, we would not exist! Literally. No bees = extreme decrease in pollination = extreme decrease in varieties of food = Not good! "If the bee disappears from the surface of the earth, man would have no more than four years to live." ~ Albert Einstein

So what are the benefits of bees? Well, from a medical standpoint, MANY! Bees not only provide us with honey, but also royal jelly, propolis and bee pollen! All of these substances made by bees are

specialized in the sense that they cannot be reproduced by man in any lab setting. In other words, we have tried to replicate these substances and cannot. There are unidentified compounds that cannot be recreated by man! Special substances that the bees "infuse" their products with! It is these special compounds that give bee foods their healing properties... besides the fact that they're PACKED with nutrients!

Honey itself has been used for hundreds of years (probably thousands!) as a home remedy for numerous ailments such as burns and sore throats. Chinese herbalists have used honey to "cure" different herbs and alter the action of herbs, giving the herb an entirely different application in healing once treated with honey! It is said that honey is the only true "complete" food known to man, including vitamins, minerals, amino acids and even water! It is also anti-viral, anti-bacterial and anti-microbial! The best whole food around! They even make medical gauze infused with honey now to promote wound healing.

Bee pollen, royal jelly and propolis are also bee foods with multiple healing benefits and applications. Bee pollen is loaded with amino acids (the building blocks of proteins) and B vitamins. It's great to put into smoothies for that extra boost! Royal jelly contains high amounts of estradiol and can be helpful in treating

hormonal symptoms for women. It is actually what bees feed their larva when they first hatch and the superior food fed to the queen during her entire life!

Propolis is the most interesting because it is mainly resin from trees infused again with some special unidentified bee juice! It is anti-microbial in nature. The bees use it to protect their hive from infection and disease as well as using it as a stabilizer/strengthener. One amazing fact I learned while reading from the above link mentioned is this: The ancient Egyptians observed that bees would use propolis to encase invaders of their hive, such as other insects, to prevent any disease from spreading. The insects were "embalmed" in a sense and after observing such activity, the Egyptians actually used propolis as their own embalming agent. Amazing!

There are even homeopathic applications of using Apis (the genus name of the bee) to treat different ailments. Bee sting therapy to treat arthritis is also being used! Although with the recent development and loss of our bee population, I would not promote this therapeutic application at this time. The possibilities however go on and on!

Bees have been alive and teaching us for millions of years! They are now teaching us that our world is no longer supporting a healthy environment in which they can live. We need to take this lesson to heart and turn things around! Please be observant of your surroundings. Be aware of your impact on the world around you. Look out for your fellow man in every aspect that implies. We cannot survive on our own. It takes much more...

This article is just a brief start. Thanks for joining me. Bee Well~

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