

# Pine Cones and Needles

By Scarlett Ayres

Pine cones are held together by natural resin until cones are mature and open, releasing the seeds. In forests, cones and needles slowly decay and gradually over time fertilize the trees above them. These same traits make pine cones and needles suitable for mulch. Pine cones are composed of wood scales and can function like other wood mulches. Pine needles make a lightweight, organic mat around plants. Both pine cone and pine needle mulch insulates plants, allows air circulation to the soil and decomposes slowly. This slow decay is beneficial to irises as it releases nutrients into the soil. The needles interweave into mulch that breaks up rain drops, prevents soil erosion and reduces water evaporation from the soil. They don't hold moisture as other mulches thus reducing the risk of the rhizome rotting. The pine cones are small in Las Cruces and are usually less than 4 inches.

## Advantages

The big advantage is that pine needles and pine cones are free. You can find them all over Las Cruces, especially after this spring's high winds. As I walk the dog in the evening, I pass by houses with pine trees next to the fence. One can usually pick up a bunch of cones that has fallen outside the fence after each windstorm. Pine cones contain seeds but there must be a trick to get them to sprout. I never see seedlings in my neighborhood. I also never have seen bugs on the pine cones I picked up around Las Cruces, though a spider or two wouldn't surprise me. However, the same cannot be said about the pine cones I obtained near my brother's house in Florida. I picked up a bunch of these 9-inch beauties over Christmas and had to spray them with bug spray. They currently make a beautiful texture in the large planter in front of my house.

As the pine cones contain resin, they shed water and disperse heavy raindrops into smaller droplets, reducing soil erosion. Due to their open cone architecture, whole pine cones encourage air circulation while protecting soil from wind erosion. However, a decent dust devil can pick up the pine cones. I noted in my web research, that some people put the pine cones and needles in their shredders. Either whole or shredded, the pine cones insulate plants against weather extremes, keeping the soil cooler in summer and warmer in winter. The temperature moderation promotes plant health by keeping roots from freezing or overheating and reduces upheaval of iris rhizomes caused by the freeze/thawing that can occur in our area. Like any mulch, the pine cones and pine needles reduce water evaporation by protecting the soil from direct sun. The pine needle lightweight mat settles quickly, requiring frequent needle replenishment. Just scatter whole pine cones and needles around but not on your irises.

Whole pine cones can be a deterrent to dogs or cats digging holes. The brittle pine cones act as stiff barriers to pet scratching or digging. As the cones slowly decay, the bottom scales in contact with wet soil decompose first, leaving the top stiff scales to provide prickly protection

against pet antics. Pine needles also make a good barrier against slugs. Some web sites states that pine needles do not attract termites and protects plants from insects that approach stems from the ground. According to Texas A&M University, pine needle mulch also prevents soil-borne diseases.

As pine cones decay over months or years, they provide ongoing organic fertilizer to the irises. However, microorganisms will pull nitrogen out of the soil while decomposing the pine cones and needles but will release it into the soil once the decomposition process is finished. Though, this is a very, very slow process. It is certainly too slow to help annuals. Pine needles all are carbon. Note the literature talks about the myth of pine cones and pine needles acidifying the soil. Though, this maybe true for fresh needles but not dry, brown needles. Once the needles turn brown, there is very little acidity left. One web site states that it's the pine pitch that's acidic, and if the tree is stressed, some of the pitch could fall to the ground and get on the needles, but it's in small amounts. This may be a benefit since our soil and our water are alkaline, and irises prefer neutral to acidic soil. Pine straw mulch usually tests out at a Ph of 6.5 which is fine for irises.

To summarize:

- Insulates tender roots from temperature extremes.
- Protects against digging pets.
- Keeps soil moist longer.
- Encourages water infiltration into the soil and reduces runoff.
- Eliminates erosion caused by and rain-splash impact and high winds.
- Protects against soil compaction by reducing the rain impact directly on the surface.
- Can help make the soil slightly more acidic.
- Provides some nutrients slowly over time.
- Pine needles stay put and will not erode.
- Does not have to be removed. Just add more.
- Better than putting it in the land fill.
- The BEST things in life are free.

## **Disadvantages**

Our area is dry and loose pine needles and pine cones maybe a fire hazard and should not be used near the house. On the other hand, I never heard of pine needles being the cause of fire. Also, the airy layers of pine needles are perfect hiding cover for my cat's favorite prey - rats. The pine needle mulches are hosts for insects and fungi that may infest plants. Pine needles and possibly cones may contain dust and mold which cling to the needles and may cause allergies upon application.

Whole pine cones are not suited to slopes or in pathway areas due to their irregular shape and resin content. Both characteristics make cones slippery and unsafe for foot traffic.

Pine needles contain terpenes, which can interfere with seed germination and new plant growth. Terpenes are what you smell when you buy a Christmas tree. Terpenes also are highly flammable but are short-lived. It dissolves in water or dissipates in the air, but leaves behind enough of a trace to discourage microbes and support fungal growth. So, by the time the pine needles become mulch in the garden, the needles have browned and the terpene has dissipated. Adding manure or grass clippings will break down any remaining terpenes. It seems best to stay away from green needles and stick with the brown stuff. It makes you wonder about chopping up those old green Christmas trees.

Pine needles are sold in many parts of the country in big bales. I figure, you wouldn't be able to buy the needles if it was bad. Plus the American Rose Society uses pine mulch at one its official Rose Gardens.

## **Other Uses for Pine Cones**

You can always smear peanut butter/butter on pine cones and roll in seeds for a bird feeder. Another possibility is to use them in the bottom of your flower pots instead of using gravel. Pine cones are much lighter than gravel.

## **Interesting Reading**

[http://www.villagernursery.com/Websites/villager/files/Content/1157686/Pine\\_Needle\\_Compost.pdf](http://www.villagernursery.com/Websites/villager/files/Content/1157686/Pine_Needle_Compost.pdf)

<http://en.allexperts.com/q/Fertilizer-717/pine-needles-mulch.htm>

<http://yourorganicgardeningblog.com/let-nature-care-for-your-garden-with-pine-needles/>

[http://www.ehow.com/how\\_4590367\\_recycle-pine-cones.html](http://www.ehow.com/how_4590367_recycle-pine-cones.html)

No irises were killed or animals harmed in the sending of this message; however a great many electrons were horribly inconvenienced.