**Coconut Coir or Sphagnum Peat Moss? https://www.planetnatural.com/peat-vs-coir/**

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**Coir, the popular hydroponic growing medium, rivals peat as an effective soil conditioner. Here's the comparison.**

There’s a lot of discussion going on over which soil conditioner is best for your garden: sphagnum peat moss or coconut coir? Sustainability is part of the discussion. Effectiveness is another.

Truth is both are great additions to garden soil. Both are natural and plant based. Both help break up heavy, clay soils and improve water retention in sandy soils. Each has its own list of beneficial nutrients it adds to the soil. Both encourage natural beneficial microbial populations.

Both, also, have drawbacks. And that’s where the discussion comes in, on both the small drawbacks that can be compensated and the larger ones that can’t.

Coir, in [its various forms](https://www.planetnatural.com/product-category/growing-indoors/growing-media/coconut-coir/), is the relative newcomer to the garden. Long popular with hydroponic growers for its water retention, its deterrence of fungus gnats and certain diseases, and its root-supporting structure, it carries these positives into the garden where it functions much like sphagnum moss.

Indoor coir growers have long recycled their much-used hydroponic coir into their outdoor vegetable gardens and compost piles. It’s as good outside as in.

Coir and [sphagnum peat](https://www.planetnatural.com/product/organic-peat-moss/) both take up a lot of water. Coir retains water in the long run better than such growing mediums as perlite and rock wool, which suggests it will retain water longer in the garden as well. Both are excellent in trapping air in the soil, air that will benefit plant roots.

Coir pH usually runs 6 – 6.7, close to neutral. Adding coir will pretty much keep the pH of the soil you’re adding it to the same. Sphagnum tends to be acidic and is frequently used in potting of acid-loving ornamentals. Slight adjustments might be required. Of course, sphagnum makes only part of a complete soil mix, — rarely as much as a third as recommended in Mel Bartholomew’s *Square Foot Gardening*soil formula — making small increment pH adjustments not so difficult.

Coir can be high in salts. Grown in ocean climates, it often picks up additional salts after harvest. Some growers recommend washing even brands that are pre-soaked to rid them of salts. Some [brands are not only washed but composted](https://www.planetnatural.com/product/roots-organics-coco-palms/), making for more balanced mineral delivery.

It’s been found that the high potassium content of coir can interfere with calcium uptake. Again, addition of calcium amendments can take care of this problem in garden soils.

A study (link no longer active) from Utah State University found that in straight hydroponic growing situations (soilless, just peat or coir, both combined with perlite for drainage, and nutrient solution) found “poor plant growth in coir,” a result that’s contradicted by the success of all sorts of indoor growers using coir. “No brand (of coir) performed consistently better than sphagnum peat,” it concludes.

While we suggest a little care before it’s used and certain supplementation to boost calcium levels, if necessary, we don’t think, as the study recommends, the differences it discovered between peat and coir suggest coir be used “in great caution.” Here great caution seems to mean without amendment or supplementation.

Hydroponics is one thing. Mixing it with garden soil makes for a completely different proposition.

The one drawback that’s difficult to get over is one regarding peat moss and its sustainability. Peat moss is harvested from bogs that have taken hundreds, if not thousands of years to form as dead plant material piled on dead plant material. Once harvested, it’s not coming back anytime soon. Coir comes from the shell and fibers of coconuts. It’s renewable.

And this is where the heart of the discussions lay. If coir is renewable, and peat is not, why not use coir, despite its minor drawbacks? After all, peat has drawbacks — its acidity and ability to “trap” water in outdoor soils, making them mucky — as well.

A natural, organic soil conditioner! **Black Gold® Organic Peat Moss** is an excellent all-purpose potting mix ingredient and soil amendment. Contains a unique cell structure that helps regulate moisture and air around plant roots creating an ideal growing environment.

Not everyone considers peat unsustainable. The Canadian Sphagnum Peat Moss Association, in its [“Industry Social Responsibility Report”](http://peatmoss.com/responsible-production/social-assessment/) from 2014 makes an argument that peat is a resource they’re protecting. In a well-circulated piece (among peat lovers anyway) that used CSPMA’s figures, Jeff Ball at *Garden Rant*made a case that peat is renewable:

*Here are the simple facts: Canada has over 270 million acres of peat bogs which produce peat moss. Each year the peat moss industry harvests only 40,000 acres of peat moss mostly for horticultural use. If you do the math that comes to one of every 6,000 acres of peat moss is harvested each year. And here is the cherry on top. Peat bogs are living entities. The peat bogs grow 70% more peat moss each year than is harvested. With that data I consider peat definitely a renewable resource.*

On the other side, the Oregon State University Extension Service makes [a good case](https://extension.oregonstate.edu/news/coir-sustainable-alternative-peat-moss-garden), based on sustainability, for using coir instead of peat. It quotes other studies that examined the effectiveness of sphagnum peat and coir:

*Researchers at Auburn University and University of Arkansas compared peat and coir as soil amendments for horticulture. They found that coir performed on par with peat.*

The third way here is to use *less* sphagnum moss if you’re using it at all. Square-foot gardener Bartholomew states that his efficient, small space gardening methods justify the use of peat in his soil formula. The peat industry has looked at combining sphagnum with other products in ways that maintain its effectiveness in smaller amounts. Sphagnum peat moss is [found in better brands of potting soil](https://www.planetnatural.com/product/happy-frog-potting-soil/).