

Lighten Up Your Garden Soil

By Susan Camp

Gardening today is very different from gardening in the mid-twentieth century. I can remember my dad spending backbreaking hours in the summer heat pushing a hand mower, raking the grass cuttings, and bagging them for pickup. He sprayed and spread copious amounts of what I am sure were deadly pesticides, herbicides, and fertilizers. Thank goodness we never lived on a waterway. He also used peat moss, bags and bags of it, for his roses and azaleas. He swore by the stuff and our yard in spring and summer was filled with gorgeous flowering shrubs.

Peat moss still is used to lighten and aerate heavy soil and increase the water-holding capacity of sandy soil. Peat adds little nutritional value, but it is very acidic and can decrease the pH of the soil, which benefits acid-loving plants like azaleas, camellias, and gardenias. Peat moss also serves as a growing medium for mushrooms and orchids and for starting seeds and plant cuttings.

Although peat was dried and burned as household fuel for centuries, it has been used as a soil amendment only since the second half of the 20th century. In recent years, environmental scientists have voiced concerns about the over-harvesting of peat, sometimes referred to as peat mining, from peat bogs in Europe, the British Isles and Ireland, and Canada, which is the world's leading peat producer. Peat bogs also exist in regions of South America, New Zealand, and Australia. Once destroyed, the fragile ecosystems of peat bogs take hundreds to thousands of years to recover and some may never do so. Commercial harvesters claim that peat mining is a sustainable practice and sphagnum moss replanted in harvested areas will restore ecological balance in 5 to 20 years. Some wetland scientists disagree with this estimation, stating that replanted peat bogs often grow back as a monoculture, lacking biodiversity. Natural peat bogs contain a wide variety of plant and animal life that can be lost through peat mining.

Acidic sphagnum moss is the primary component of peat, although other plants coexist with the sphagnum and contribute to the development of the bogs. The living sphagnum moss on the surface is harvested and dried to form peat moss. The material below ground becomes the peat that is mined for fuel. Sphagnum decays slowly and preserves plant and animal material, allowing scientists to study past environments.

The argument concerning the sustainability of peat bogs as part of the earth's wetlands is likely to continue. The fact remains that commercial growers and home gardeners alike need a product that will amend and condition soils. One alternative is coir, the tough, hollow fibers found between the inner and outer shells of coconuts. Coir is a byproduct of coconut harvesting and proves to be comparable in performance to peat moss. The pH of coir is close to neutral, so it can be used as an amendment for non-acidic plants. Coir may have more water-retention capacity than peat and is rot-resistant and free of fungal spores and bacteria.

India, Sri Lanka, the Philippines, and Mexico produce most of the world's coir. The cost is comparable to that of peat moss. Coir is sold at garden centers in bales and bricks. The bricks are inexpensive and easily portable. Reconstitute coir bricks with water by placing them in a container that will allow them to expand up to seven times their original size. Use coir as you would peat moss to amend soil. Don't throw away coir bricks you have had in the shed for several years; since coir doesn't rot, the bricks will be usable.

Other available products for soil amendment include mushroom compost, composted kitchen and garden waste, and well-rotted manure. Some of these materials can be obtained or produced at little or no cost. The advantage to these products is that they add nutritional supplements to the soil.

March 24, 2016