

**Table 4. Relative cation exchange capacity for different soil textural properties.**

Exchange capacity	Level	Textural properties
0-6	Very low	Sandy soils*
6-12	Low	Sandy loams*
12-18	Medium	Loams and silt loams
18-24	High	Clay loams
>24-200	Very high	Clays and certain organic matter

\*Textures used for golf green construction.

One problem with using organic matter as a soil amendment is being able to evenly distribute it throughout the root zone soil mix. Pockets of organic matter often form which diminish its desirable characteristics. A small amount (e.g., 5 to 10% by volume) of an appropriate soil is usually easier to evenly distribute compared to some organic source but care must be used in selecting a soil source. Many soils are high in clay or silt (>10% total), which if used, may clog internal water drainage. Excessive silt and clay is the major reason river bottom or other sedimentary type soil or peat are unacceptable for modified soils of high traffic areas.

**Table 5. Qualitative comparison of soil organic amendments used to modify golf green root zones (listed from most to least desirable).**

Soil Amendment	pH	Cation Exchange Capacity	Water Holding Capacity	Durability (years)
Peat humus	acid	good	fair	5+
Reed-sedge peat	acid	good	good	4-5
Moss peat	acid	fair	excellent	1-3
Ground fir bark	acid	fair	fair	5
Lignified wood waste	acid	poor-fair	good	8+
Sawdust	acid	fair	fair	1+
Sphagnum moss peat	acid	good	good	1-3

**Table 6. Characteristics of commonly used peats for soil modification.**

Type	Composition	Color	Level of decomposition	Remarks
Peat humus (cultivated peat, black peat)	non-fibrous	dark brown to black	advanced	longest durability of peats
Reed-sedge peat (lowmoor peat)	semi-fibrous	reddish brown to dark brown	partially to substantially	none
Moss peat (peat moss, sphagnum peat, highmoor peat)	fibrous	tan to brown	partially	difficult to mix into soil
Sphagnum moss (top moss)	fluffy, fibrous residue of moss	yellow to tan	fresh	Used more as a surface and for packing boxes
Sedimentary peat	non-fibrous	brown to black	-----	contains silt and ash; least desirable of the peats; use with caution