



Biogreen Peat

Biogreen Peat will improve the performance of most Australian soils and can be supplied as pellets or screened to $\leq 4\text{mm}$.

Key Benefits

Increasing Soil humus Content

- **Improves soil friability and resilience (structure) for reduced erosion and increased root development**
- **Increases available water-holding capacity for improved water use efficiency**
- **Reduces nutrient leaching and increases nutrient availability (increased cation exchange capacity) for Improved fertiliser efficiency**
- **Reduces damaging effects of soil-acidifying agricultural practices**
- **Increases microbial activity for more complete nutrient cycling and disease suppression**
- **Increases soil fertility**

The Importance of Soil Organic Matter

Ideally, soil organic matter should be a combination of humus (highly decomposed organic matter) and particulate organic matter (organic matter in the early stages of decay). While humus is slow to break down in the soil, once lost, it takes decades to rebuild.

The particulate organic matter can be readily replenished through retention of crop stubble, using green waste or manure and in the case of pastures and sports fields, the particulate organic matter is constantly being replenished through the growth and die-back of the root mass.

Although manures and green waste composts have significant short-term benefits, their long-term benefits are limited, only small amounts of humus forming as a result of their decay. With Biogreen Peat we have organic matter in the form of humus, ready for application.

Therefore by applying Biogreen Peat in conjunction with the particulate organic matter, we can maintain both important forms of organic matter. In this way a more sustainable soil system is created where nutrients are continuously cycled and made available for plant uptake and soil structure is made resilient to production practices.

Application Rates

There is an upper limit, depending on soil type and application, above which the addition of any more Biogreen Peat will not enhance soil properties. However to apply such large volumes to agricultural or sports fields would be both impractical and costly, therefore application rates should be based on affordability and practicality (see tables 1 and 2).

To incorporate Biogreen Peat into the soil profile at approximately 1%, 5%, 10% and 20% by volume, applications should be as presented in tables 1 and 2.

Table 1: Farm and sports field application rates to blend at 1%, 5% & 10% of soil profile by volume (m^3/ha)

% Soil Profile Volume	Top 5cm	Top 10cm	Top 20cm	Top 30cm
1%	5	10	20	30
5%	25	50	100	150
10%	50	100	200	300

Table 2: Home garden application rates to blend at 5%, 10% & 20% of soil profile by volume (L/m^2)

% Soil Profile Volume	Top 5cm	Top 10cm	Top 20cm	Top 30cm
5%	2.5	5	10	15
10%	5	10	20	30
20%	10	20	40	60

Key Analytical Parameters

Biogreen Peat is a natural product formed over thousands of years under highly variable weather conditions.

Therefore an exact analysis cannot be given. The table below represents the range in which parameters can be expected to lie based on tests conducted during 2005-2007.

Note: the processing of the peat leads to variations in moisture content and bulk density only. All other variables lie in the same range for each form of Biogreen peat.

Parameter	Unit	Untreated	10mm screened	4mm screened	Pelletised
Moisture content	% by weight	70 – 80	65 – 75	35 – 55	35 – 45
Bulk Density	Kg/L	0.70 – 0.8	0.65 – 0.75	0.50 – 0.60	0.65 – 0.75
pH	(1:5 water)	5.0 – 6.0	5.0 – 6.0	5.0 – 6.0	5.0 – 6.0
Conductivity	(μ S/cm) (1:5 water)	500 – 1300	500 – 1300	500 – 1300	500 – 1300
C/N Ratio		20-30	20-30	20-30	20-30
Total Organic Matter	% dw	50 – 80	50 – 80	50 – 80	50 – 80
Total Organic Carbon	% dw	29 – 47	29 – 47	29 – 47	29 – 47
Total N	% dw	1.5 – 2.0	1.5 – 2.0	1.5 – 2.0	1.5 – 2.0
Total P	% dw	0.03 – 0.05	0.03 – 0.05	0.03 – 0.05	0.03 – 0.05
Total K	% dw	0.05 – 0.10	0.05 – 0.10	0.05 – 0.10	0.05 – 0.10
Total S	% dw	0.50 – 0.70	0.50 – 0.70	0.50 – 0.70	0.50 – 0.70
Total Ca	% dw	1.0 – 2.0	1.0 – 2.0	1.0 – 2.0	1.0 – 2.0
Total Mg	% dw	0.35 – 0.55	0.35 – 0.55	0.35 – 0.55	0.35 – 0.55
Total Na	% dw	0.10 – 0.15	0.10 – 0.15	0.10 – 0.15	0.10 – 0.15
Total Fe	% dw	0.65 – 0.80	0.65 – 0.80	0.65 – 0.80	0.65 – 0.80
Total Mn	ppm dw	20 – 45	20 – 45	20 – 45	20 – 45
Total Zn	ppm dw	5 – 15	5 – 15	5 – 15	5 – 15
Total Cu	ppm dw	10 – 20	10 – 20	10 – 20	10 – 20
Total Co	ppm dw	2 – 10	2 – 10	2 – 10	2 – 10
Total B	ppm dw	20 – 90	20 – 90	20 – 90	20 – 90
Total Mo	ppm dw	1 – 6	1 – 6	1 – 6	1 – 6
Exch. Ca ²⁺	meq /100 g	25 – 40	25 – 40	25 – 40	25 – 40
Exch. Mg ²⁺	meq /100 g	20 – 25	20 – 25	20 – 25	20 – 25
Exch. Na ⁺	meq /100 g	2 – 3.5	2 – 3.5	2 – 3.5	2 – 3.5
Exch. K ⁺	meq /100 g	0.2 – 0.4	0.2 – 0.4	0.2 – 0.4	0.2 – 0.4
Exch. H ⁺	meq /100 g	30 – 40	30 – 40	30 – 40	30 – 40
Exch. Sodium Percentage (ESP)	%	< 6	< 6	< 6	< 6
Cation Exchange Capacity (CEC)	meq /100 g	80 – 105	80 – 105	80 – 105	80 – 105

dw: dry weight