BORD NA MÓNA

BORD NA MÓNA HORTICULTURE LIMITED

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Technical Benefits of Bord na Móna Peat

PRODUCT LIST

Bulk Products	pH	Von Post	E.C.	Air Content	Water Capacity
Coarse Peat	3.8-4.4	5-7	<0.2 m.S	11-17%	5.5-6.6
Superfine Peat	3.8-4.4	5-7	<0.2 m.S	10-16%	6.5-7.1
Fine Peat	3.8-4.4	5-7	<0.2 m.S	12-25%	5.5-6.3
Fraction 2	3.8-4.4	5-7	<0.2 m.S	20-30%	4.0-5.2
Fraction 3	3.8-4.4	5-7	<0.2 m.S	25-30%	4.2-5.2

Packaged Products	Description	Size	Pks Per Pallet
Superfine Peat	Propagating & amenity grade	200L	18
Fine Peat	Bedding grade	200L	18
Medium Peat	General purpose grade	200L	18
Medium Extra Peat	Pot plant grade	200L	18
Medium Coarse Peat	Nursery stock grade	200L	18
Coarse Peat	Container grade	200L	18
Seed & Modular Compost	Propagating and seed sowing	75L	42
Bedding Compost	Bedding	75L	42
Pot Plant Compost	Pot plants	75L	42
Potting Compost	Pot plants	75L	42
Nursery Stock Compost	Nursery stock	70L	42

The above products are available in big bales 4.5m^3.

Orders can be placed with Aidan Campion by the following means:
Tel: +353 45 439286, Mobile: +353 (0)87 3294104 or Email: aidan.campion@bnm.ie

All across Europe thousands of professional growers and potting soil manufacturers have realised the benefits of using Shamrock Irish peat.

Scientists from many different research stations have conclusively shown the benefits of using Shamrock Peat compared to other peat. Tests have shown that Shamrock peat is very stable with good buffering qualities.

Consequently using Shamrock Irish Peat ensures the best possible environment for plant growth.

The key benefits of Shamrock peat are as follows:

- mechanical and structural stability to ensure a good root environment
- excellent pH and salt buffering capacity to protect the plant against unfavourable environmental conditions
- resistance to self-heating
- high levels of aeration if required
- chemical free
- weed free
- reliability of supply
- ISO certification

STRUCTURAL STABILITY

Stability refers to that property of peat which prevents it from breaking down due to microbial, mechanical or other factors.

Structural stability relates to microbial decomposition and consequent slumping of peat.

Slumping

Slumping refers to the breakdown of peat in a pot during cropping. Slumping of peat due to microbial decomposition during cropping can have serious effects on the quality of the resultant plants. When crops are grown for long periods or have high aeration requirements and/or irrigation is ebb and flood, the use of stable peat which does not slump is recommended.

Volume reduction of fractions of various peats after 23 months incubation

Substrate	Size (mm)	% Volume Reduction
H5 (Ireland)	0-3	17
	5-10	14
H2 (Sweden)	0-3	40
	5-10	29
H3 (Baltic)	0-3	35
	5-10	31

Lower volume reduction indicates greater stability

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“ When peat is used as a soil improver or substrate for long term crops, its structure and physical properties may change dramatically if it is slightly decomposed. Therefore it is advisable to use more decomposed peat qualities for these applications. ”

‘Influence of decomposition on the physical structure and water management in horticulture applications of peat’ (Neiminen and Reinikainen, International Peat Congress 2008)

Shrinkage of peat in mm in pots in the field during the growing season

Note the lower shrinkage of Irish peat which indicates greater stability

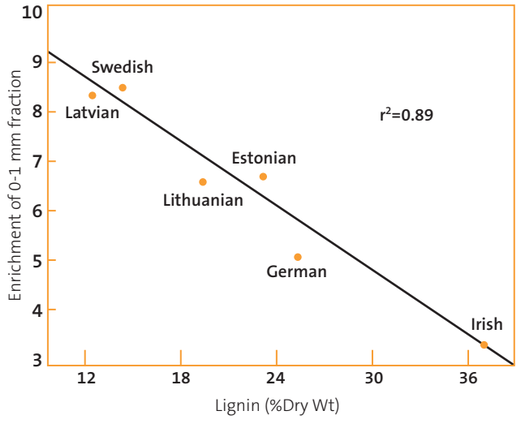
Substrate	Volume shrinkage without plants(mm)
H6 Stable Irish	10.7
H3 Baltic	23.8
H2 Finnish	20.8

Mechanical Stability

Mechanical stability refers to the propensity of peat to breakdown during mechanical handling. This leads to the creation of fine particles and consequently to a reduction in air space. If peat is mechanically stable it will breakdown less during handling and transport. This applies especially to fractioned and coarse peat.

Studies have shown that Shamrock peat is more resistant to mechanical breakdown. This is due to the relatively high levels of lignin in the older and more decomposed Irish peat. Younger peats have less lignin and are therefore more vulnerable to breakdown.

Relationship between lignin content and mechanical breakdown



“ Lignin levels were higher in older (Irish) peat than in other younger peats and thus Irish Peat is less likely to breakdown as a result of handling. ”

BUFFERING CAPACITY

Buffering effects of Peat on pH

Buffering refers to the capacity of a material to withstand changes in either pH or salinity, often as a consequence of water quality.

With the same rate of lime the net change in pH is lower in Irish peat compared to other peat. Irish peat is more buffered against pH change which can lead to nutrient deficiencies/toxicities in growing media. In a practical sense this means that Irish-type peat is better at protecting the plant from the effects of poor quality water.

RESISTANCE TO SELF-HEATING

Bord na Móna uses the Peco production system in contrast to the Haku system used by the majority of producers. The Peco pile is much lower and there is less chance of self-heating as is the case with the larger Haku pile. In any case the Irish peat is more humified and there is less chance of self-heating. Self-heating of peat can lead to the production of toxins which can affect plant growth. Self-heating can also occur when peat is stored for longer periods.

RELIABILITY OF SUPPLY

The scale of Bord na Móna’s production operations and it’s policy of investing in large stocks of raw materials ensures customers of supply of quality materials even in years when the harvest is poor.

AERATION

Milling is carried out with a blade miller to provide larger particle size and the Peco System is used to harvest and stockpile the peat. This results in a product with a better physical structure and lower dust content.

Irish peat is derived mainly from Sphagnum imbricatum while Baltic peat is derived mainly from S. cuspidatum. S. imbricatum has larger branch and stem leaves meaning that air space is still likely to be high even with fine material e.g. 0-3mm peat. Larger leaves also result in a higher cation exchange capacity (CEC).

CHEMICAL-FREE

No herbicides are used on Bord na Móna Horticulture bogs. Therefore there is no danger of residual effects of herbicides. Weeds are instead removed mechanically.

WEED-FREE

Every stockpile is monitored for weed germination to ensure that the products meet the standards set by the RHP. (Dutch regulatory body for growing media)

ISO CERTIFICATION

All Bord na Móna factories and Dublin port facility have received the ISO 9001 accreditation. Continuous sampling of products during processing ensures that the finest quality standards are achieved.

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