

## WHY PEAT?

There are many good reasons why peat should be used as a source of energy, in horticulture, and in environmental care in Finland.

### 1. Sustainable Development

One third of Finland's area is peatland, but less than one percent is utilised industrially. In Finland, Sweden and Estonia, the peat resources are renewed faster than they are consumed. The same peat harvesting areas can be used to produce peat for both energy and environmental purposes, and as a growing medium. Decomposed peat is especially suitable for energy production.

In Finland the utilisation of peat is 16-25 TWh/a, and the growth is about 40 TWh/a. In Sweden the corresponding figures are 2-2.5 TWh/a and 10-15 TWh/a, and in Estonia 1.4 TWh/a and 9.5 TWh/a.

In favourable conditions, when the water level of the area is regulated, the helophytes covering the mire start to regenerate in 3-5 years. Geological mire (minimum of 30 cm peat layer) does not take more than 50-100 years to re-grow, either.

Thanks to ample research material, the life cycle of peat and its effects are well-known. Land use planning, environmental impact assessment issues, and environmental licence practices strictly guide the sustainable use of peat resources.

### 2. Conservation Values and Protection of Biodiversity

Only about 1 % of Finland's bog area is reserved for peat production. In Sweden the share is about 0.2 % and in Estonia 1 %. In Finland more than 12 % of the bog area is subject to mire conservation programmes. In Sweden and Estonia, the percentages are 4 % and 16 % respectively. Peat production is prohibited in conservation areas. In addition, all the protected species and biotopes in these areas have to be preserved also in the bogs used for peat production. The protected species and biotopes have to be defined and identified, and protection measures taken before peat production can start.

### 3. Climate Changes

The level of carbon dioxide emissions from peat combustion (106 mg/CO<sub>2</sub>) is lower than the emissions from wood combustion (about 110-114mg/CO<sub>2</sub>). The emissions from peat combustion are included in the global climate calculations, whereas the emissions from wood combustion are not. This is because it is considered that the carbon dioxide created by wood combustion is absorbed by plants. Helophytes also absorb carbon dioxide, but this fact is overlooked in the climate calculations. Peat is a renewable energy source, and it is an exceptionally good basic fuel, which can be co-combusted with wood, agricultural energy sources, and recycled fuel.

Swedish studies show that the use of peat as an energy source is a considerably better way to prevent climate changes than the use of coal, if the issue is looked at in a slightly longer term and considering the whole life cycle of the fuel. Drained bogs with a heavy layer of peat, and especially bog fields are sources of greenhouse emissions. The greenhouse emissions in these areas can be reduced by concentrating peat production on them, and by using the peat to replace imported energy.

#### **4. Energy Policy**

From the combustion technological point of view, increased use of wood and e.g. reed canary grass as energy sources requires a simultaneous use of peat. Peat distinctly improves the technical possibilities of burning wood and secures fuel supply in all possible situations. As the sulphur contained in peat binds the fine particles created in wood combustion, co-combustion of wood and peat decreases fine particle emissions into the environment. Peat also clearly reduces the corrosion that the sole use of wood causes to boilers.

In terms of costs, peat is an extremely competitive and stable-priced fuel. Decisions to invest in peat are based on a competitive price and secure availability.

Along with wood, peat secures Finland's energy self-sufficiency and energy supply.

#### **5. Employment Effect**

The employment effect of peat in Finland is more than 7000 man-years. The peat industry provides jobs both in urban areas and in areas suffering from a shortage jobs. Besides, peat production helps preserve the entrepreneurship base needed to continue the utilisation of also other domestic fuel sources.

#### **6. Growing Media and Environmental Products**

Peat is a natural and environment-friendly material that can be used as a growing medium and litter, in manure and compost handling, in landfill site management, in oil spill prevention, and in landscaping.

Peat is a traditional and natural growing medium in greenhouses. It balances the changes in nutrient and moisture contents of the growing medium in a natural way.

Peat used as a growing medium is easy to dispose of by composting it or by using it in farm fields.