

# Sphagnum Moss – ‘Green Gold’

Sphagnum moss, a product and industry largely based on the West Coast, earned New Zealand over \$18 million for the year ended 1993. It is an international commodity, of high value when processed, and provides readily available employment for all those who seek to work with it – all attributes that justify its image of “green gold”. That is, all except one, its sustainability, for unlike gold, sphagnum moss continues to grow and reproduce year after year with proper site management.

From the early days of the Bronze Age the healing powers of moss were recognised, and more recently because of its naturally sterile fibres it has been used for surgical dressings.

## Major Use

Today the major use for sphagnum moss is in the orchid industry, where the excellent water-holding capacity of its fibres provide an effective and suitable medium for keeping the orchid plant moist, whilst providing good root ventilation to prevent disease. It is capable of holding up

to 20 times its own weight in water, and Japanese orchid growers estimate that their plants grow up to one-third faster in moss compared to other growing mediums.

*Sphagnum cristatum*, the main species exported from New Zealand, is regarded as the best quality and species to use for orchid growing. Other countries such as Chile, China and Australia also produce moss, but New Zealand sphagnum, being lighter coloured, thicker and of longer fibre length, is regarded as superior.

Japan has traditionally been the major moss market and continues to buy over 80% of New Zealand’s production. Other markets are continually being developed, with Taiwan, Korea and the United States of America of importance to the New Zealand industry.

The sphagnum industry has grown significantly since the mid 1970s and now exports just over one million dry kilograms of moss, the equivalent of 800 container loads, a year. (One thousand tonnes dry is equivalent to 14 thousand tonnes of wet moss, for which pickers receive some \$400/wet tonne).

## Hand Picked

Wet moss is hand picked from swamps (as well as areas often left derelict from turn of the century logging, land clearing and burning operations), gathered into large sacks and air lifted by helicopter to the nearest roadway. From here it is trucked into drying factories and either air dried or kiln dried before being cleaned, mixed and graded prior to packing.

At present the market prefers moss to be naturally air or sun dried, as this process leaves the moss soft and fluffy, and the uptake of water when the fibres are re-wet is much faster than with kiln-dried product. This has direct benefit too for local harvesters, who can produce a value-added, labour-intensive product. Plastic-covered, wooden-framed tunnel houses for drying moss have accordingly become a distinctive new part of the West Coast landscape.

Value adding also occurs in the commercial factories where packaging is undertaken. Up to 100-120 full-time job equivalents are provided in this export



A bale of freshly picked wet sphagnum moss in Westland.

industry, often, significantly, amongst young persons gaining first-time job skills. Standard commercial packs are square-packed in 25 kilogram bales and three kilogram polybags, whilst common retail packs are in 150 gram, 500 gram and one kilogram sizes, often labelled in Japanese, directly for sale on an overseas supermarket shelf.

### Three Types

Major moss production areas occur on

three land ownership types on the West Coast – the Department of Conservation, Timberlands West Coast Limited (through its subsidiary company NZ Sphagnum Moss Exports Limited), and private land.

With the industry having gone through its glamour days, the emphasis is now on quality, reliability and sustainability. Some moss swamps are being harvested for the third or fourth time and, with careful management, cycle times can be as short as four years.

Sustainability harvest policies, now

operated by the major companies, will ensure that the sphagnum moss industry will continue to remain an important part of the West Coast economy in years to come, and an important contribution to maintaining employment opportunities in the region.

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Potting orchids in sphagnum moss in Japan.

## Worldwide response to Rotorua forestry conference

Ethiopia, Peru, Israel, and Nepal are among the countries that may be represented at the Second International Conference on Forest Vegetation Management to be held in Rotorua in March 1995. Conference organisers received over 400 replies to their first announcement, representing all regions of the globe.

"This response reflects the tremendous interest worldwide in sustainable and environmentally benign forest establishment practices," said Dr Jerzy Zabkiewicz,

a science manager with the New Zealand Forest Research Institute. "The natural forests of the world are being locked up as a result of conservation pressures, and people are looking at how to achieve ever greater productivity gains from plantation forestry. Clearly, this is an area in which New Zealand foresters and researchers excel."

The specific theme for the conference is 'inter-rotation management', a term derived in New Zealand to emphasise that

operations within intensively managed forest ecosystems are not independent activities. IRM encompasses interactions among harvesting operations, land preparation, establishment methods, and early-rotation silvicultural requirements or practices. The combined effects of these practices must be assessed in terms of long-term productivity (sustainability), site quality, biodiversity, water quality, and environmental protection in its widest sense.