



Port McNeill's "Sea Soil"

Award-winning product solves forest and fish industry waste woes

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Waste disposal is an issue that has challenged both the forest and fish industries for years. Woody debris, for instance, represents 5–10% of sort yard throughput in coastal British Columbia operations (Forrester 1996). Although some of these residues provide wood chips, hog fuel, or rock for sort yard maintenance, the smaller components classified as "fines" are difficult to dispose of or use.

Fines were previously burnt or land-filled, but these disposal methods are no longer appropriate because of increased environmental concerns, and the costliness and long-term maintenance liability associated with landfills. When fish waste from fish plants meets wood waste, however, a great soil fertilizer is created. **Don Waugh**, founder of Port McNeill's Sea Soil compost company, and UBC Forest Sciences conducted several projects to test this combination.

It all began with a simple Forest Renewal BC road deactivation project in Beaver Cove near Port McNeill, BC. Here, composted sort debris was applied to a depth of 10 cm on deactivated logging roads, which had been planted with regenerating trees. The project compared the growth and vigour of these trees to those that were not treated with compost. The results demonstrated that composted wood was an effective soil conditioner and provided a good disposal method for dry land sort waste. For example, in one growing season, the untreated site yielded an average tree height of 8.8 cm compared to 15.5 cm where the compost was used. Average tree diameter increased as well—on the untreated site, diameters increased by 5.6 mm compared to 11.6 mm on the composted site. In addition, just 83% of seedlings survived without any compost compared to a 100% survival rate for the composted seedlings.

Now, Sea Soil compost has been successfully introduced to the marketplace as a fertilizer for home use, and was recently certified organic. In 2003 and 2004, VanDusen Botanical Garden named Sea Soil compost as the "Best Organic Ecological Product." The family-run, community-spirited business currently employs 14 Port McNeill residents. Sea Soil

donates bulk material for various children's fund-raising events and removes sort-yard residues on northern Vancouver Island in an environmentally sound manner. Canadian Forest Products Beaver Cove Logging Division provided the land for the composting operation, and now supplies the composting company with all of the forest fines from its wood waste. Sea Soil also works with Northland Power Chip Generation and processes dry land sort residues from Western Forest Products' Port McNeill operation and those from Ted Leroy Trucking. 🌲

Reference

Forrester, P.D. 1996. Fibre recovery from log sortyard residues on coastal British Columbia. FERIC. Vancouver, B.C. Technical Note TN-249.

How sea soil is made

Residues are processed using a trommel screen to separate fines from the wood used for pulp chips or hog fuel. This wood component is loaded into barges destined for Howe Sound Pulp at Port Mellon. The fines used to create Sea Soil go through the following process:

- Twelve 30-m³ truckloads of residual fines are transported daily to Sea Soil's composting site. This site is isolated enough so that any generated odour is not a problem.
- Fish waste, which is dumped in a pit close to the stockpiled fines, is covered with the fines, mixed to the correct ratio with an excavator, and monitored for a 5-week period.
- Wastes are then moved to windrows that are monitored and turned when necessary, and composted for 2 years at a temperature of 60°C.
- After cooling, the compost goes through a 1.25-cm screen, and is then placed under cover. The final product is either bagged for shipping to distributors (from Vancouver Island to Manitoba), or loaded into gravel trucks for bulk-sale deliveries.

Sea Soil remains odourless. Its 6.5 pH (slightly acidic) level enables plants to absorb minerals and nutrients, which improves their growth and vigour. Many nurseries currently use Sea Soil as a growth medium.