**Composting with Kelp in a West Coast Garden**

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Gardeners in the Pacific Northwest often complain of having no autumn amendments to add to a wintering garden. There are few fields or cows or piles of fall leaves. Instead, west coast gardens have acres of ocean, grazing starfish, and fields of kelp in their backyards. September’s strong storms and powerful south swells heave bull kelp (*Nereocystis luetkeana*) onto the beaches in a tangled, matted mess. Kelp is a perfect amendment for a west coast garden.

Bull kelp is one of over 2,000 different species of brown seaweed. It grows quickly along the Pacific Coast from California to Alaska between March and September. Bull kelp’s genus is Greek for mermaid’s bladder, a tribute to the giant round bulbs at the end of the plant’s long, rope-like stem or stipe. Kids love to jump on the bulbs, technically known as pneumatocysts. A successful jump ends in a mini-explosion, releasing the carbon monoxide that helps the plant float to the surface of the ocean as it reaches for more sun. Kids also love to drape themselves with bull kelp’s wide, feathery leaves known as blades, but the most fun is using the long stipe as a perfect match for a skipping rope. When summer’s blooms dwindle and a garden needs a little extra nutrition, there it is, thrust onto the beach in heaping mounds, conveniently delivered for home gardeners to collect.

As a fertilizer for a garden, bull kelp’s nutrients stimulate plant growth, strengthen plants and build resistance to stress. It helps build soil in new garden beds and works wonders with vegetables, perennials, and fruit trees. Garden nurseries sell kelp meal and seaweed fertilizer, but it’s pricey and never seems to be enough.Kelp offers a diverse serving of nutrients to garden soil: phosphorous, nitrogen, potassium, as well as many trace elements and amino acids. Most of these nutrients are found in the slimy outer coating on bull kelp, a viscous gum made up of cell blocks called alginates.

Bull kelp is distinctly different from the small clumps of stringy, grassy seaweeds that wash up on the beach in the spring. Grasses and green seaweeds work fairly well as mulch, but they don’t decompose quickly and usually need to be discarded in the spring. The grassy seaweeds are like adding low quality hay or leaves -- they don’t have much nutritional value but they’re useful as winter mulch.

When the first batch of bull kelp drifts ashore, harvesting must happen quickly. Kelp left too long on the beach begins to decompose, making it messy, mushy and less nutrient rich. To gather kelp, a wheelbarrow or two large buckets and a machete are needed. Avoid lifting the tangled piles of kelp into the wheelbarrow. Instead, use a sharp machete to cut the pieces wheelbarrow-length before loading. Look for the biggest, fattest pieces, preferably with the bulb and blades intact.

The most satisfying part of composting with kelp happens at home. Spread the cut lengths in tidy rows on the lawn, close to the bed where it will be applied. Then take the machete and dice each length into 1 to 2 inch pieces. Scoop up these pieces and carefully toss them around existing plants. For empty beds, lay the kelp lengths right into the soil and chop in place. Avoid beds with delicate, new seedlings. Leftover kelp pieces can be tossed on the compost pile.

A backyard garden can easily absorb a single layer, unwashed, and applied annually. Chopped kelp will decompose in 1-3 months, depending on the volume of autumn rain in the region. It is best not to wash kelp because when it is washed, beneficial alginates are lost. If adding more than a single layer, too much salt will affect the soil balance making it more basic than neutral. In this case, washing it may be necessary.

An autumn garden composted with kelp is lovely to admire. A palette of fall colours -- gold, rust, and chestnut dappled with sunlight are eye-catching.

 Soon enough, as rain slants sideways, these colors will disappear, but the kelp is working its magic into healthy spring plant growth.

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