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*The Oleophilic Ability of Botanicals in Cleaning Oil from Water*

A plant's ability to absorb oil from water is known as its oleophilic capacity. This study compared the oleophilic capacity of five different plants when cleaning oil from water and looked at which characteristics of a plant may impact their oleophilic ability. Golden Pothos, Lady's Mantle, cattails, dried Spanish Moss, and Jerusalem Sage were tested to see which could absorb the most oil from a body of water. Each trial had a beginning weight of 200 grams of canola oil, 2000 grams of water, and 20 grams of plant foliage. The plants were placed in the water/oil mix for one hour. Then the foliage was removed and weighed to determine oil absorption. The results indicated that the leaf of the Jerusalem Sage soaked up the most oil, followed by Lady's Mantle and cattails. Dried Spanish Moss and Pothos Golden soaked up the least amount of oil. Jerusalem Sage was found to be the most oleophilic. It has hair-like structures (trichomes) on the surface of the plant that likely make the plant better able to trap oil. Meanwhile, Golden Pothos, which had no hairs, soaked up the least oil. Cattails were not the most oleophilic, but they were able to soak up a reasonable amount of oil and a very small amount of water. They were the most hydrophobic specimen studied. This ability to repel water while absorbing oil may make it a good choice for cleaning an oil spill out of a water source.