

forests, but, being so used, they are improved, and often, after some time, gain in value, even for agricultural crops. To find out cheap methods for covering such places with a tree-growth is, therefore a task not to be neglected. Trees should be planted on rocky hillsides, sandy barrens, along the brooks and watercourses, around the springs and by the roadside. It costs little to try the experiment, and in the results, restoring vegetation to sandy, waste places, affording shelter to cattle and preserving the present, if not restoring the lost water supply to the farm, in all this, not to speak of the increased attractiveness that the trees would lend, the planter will be amply rewarded.

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### THE FIBRE OF THE FIRST YEAR'S SHOOTS OF SUMACH AS A MATERIAL FOR PAPER PULP.

ALLOW me to direct attention to the Staghorn Sumach (*Rhus typhina*), and the Smooth Sumach (*R. Glabra*), as pulp-producing shrubs for the manufacture of paper. The Sumach Tree or Shrub approaches to the Herbaceous tribes in the glandular construction of its rind and in its pith, and the fibre of its shoots is whiter and lighter than poplar. As it is readily propagated from shoots or sprouts, it may be cultivated with profit on rugged and rocky grounds. The first year's shoots should be cut for pulp-making before they begin to wither, when the leaves are full of sap, and especially before frost. They should be stripped of their leaves, which after being wilted in the sun are spread upon shelves or racks to dry in a shaded, but airy place for a month, and in damp weather longer, before going to market. Sumach sells, after grinding, at from \$40 to \$50 per ton. The rind should be scraped off clean from the shoots, immediately after stripping them of their leaves, and dried in a similar manner, and the shoots should be dried and stored away to be sold to the pulp miller. The leaves and the rind of the Sumach contain a tanning and dyeing material having the same properties as galls, its chief consumption being in cotton dyeing. The roots of both of these varieties of Sumach have hitherto been considered troublesome in sending up suckers, and the prevalence of common or smooth Sumach was evidence that the occupant was a poor and thriftless farmer. The velvety crimson berries of the smooth Sumach are also used in dyeing. They are astringent and of an agreeable acid taste, for which reason they are sometimes used as a substitute for lemon juice, for various purposes in domestic economy and medicine, and to turn cider into vinegar. The acid is the bi-malate of lime. Prof. Wm. B. Rogers, in *Silliman's Journal*, vol. 27, p. 295, recommends a process for obtaining it perfectly pure.—A. K. in *Toronto Globe*.