

Withering of Japanese oak by sulfuric acid of an air pollutant. and prevention from withering by charcoal

OMORI, Teiko^{1*} ; YOSHIIKE, Yuzo² ; OKAMURA, Shinobu³ ; IWASAKI, Masato⁴

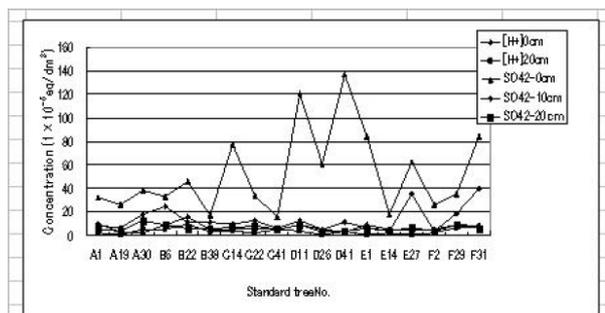
¹Teiko Omori, ²Yuzo Yoshiike, ³Shinobu Okamura, ⁴Masato iwasaki

The sulfuric acid which generates by the combustion of a fossil fuel is carried by wind and adheres to trees and only water evaporates and the sulfuric acid concentrates and accumulates. Sulfuric acid is dropped on the root of a tree by rain and it acidifies

the soil. The metal ingredient in the soil becomes a soluble compound. The eluted metal ion is absorbed by trees and it combines with phosphoric acid. The trees become shortage of phosphoric acid and decay. If the tannin contained in Japanese oak combines

with metal ion it becomes harmless to insect. Withering of trees originates in acidifications of soil. Charcoal can neutralize the acidified soil. The results of an investigation are explained on the basis of consideration from chemical standpoint.

Keywords: air pollutant, charcoal, withering of pine, withering of Japanese oak, tannin, phosphoric acid



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| sampling: Kanayama, Onuma, Fukushima 10.10.2011 |
| Measuring method: 10g/ dried soil + 25g/water. |
| Filtration after 60minutes. [H ⁺]/pH meter, SO ₄ ²⁻ /Ion chromatography |
| The relation of the hydrogen ion and sulfuric acid ion concentration in soil (1 x 10 ⁻⁵ eq/dm ³) |