AP-09

## Effect of Simulated Acid Rain on the Growth and Morphology of *Brassica campestris* L. and *Raphanus sativus* L.

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This experiment was carried out to investigate the effects of the simulated acid rain(SAR) on the growth response and morphology of *Brassica campestris* L. and *Raphanus sativus* L. under the different pH condition (pH 6.3, 5.6, 4.0, 3.0 and 2.0) of 5mm for 10 days. The leaf growth damage of *B. campestris* and *R. sativus* by SAR treatment was in the order of pH 2.0> pH 3.0> pH 4.0> pH 5.6> pH 6.3 (control). The damage was characterized by brown or white spots on the leaf surface treated with SAR at low levels of pH (below pH 5.6). The leaf damage of *B. campestris* increased remarkably after early SAR treatment than that of *R. sativus*. Length, fresh and dry weight, leaf area, root diameter of *B. campestris* and *R. sativus* decreased remarkably at low levels of pH. Root length increased at pH 2.0 in *R. sativus* and at pH 3.0 in *B. campestris* by SAR treatment, but roots were thinner and longer more than those at pH 6.3 (control). The growth of shoot was influenced by SAR more than growth of root. The stomata and leaf surface damage on abaxial leaf surface of *B. campestris* and *R. sativus* increased remarkably with decreasing pH levels of SAR.

**Key words**: Simulated acid rain, Growth response, Stomata, *Brassica campestris,*Raphanus sativus