EFFECTS OF ELEVATED CO_2 AND OZONE ON PHENOLIC GLYCOSIDES OF TREMBLING ASPEN

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We tested the effects of elevated CO_2 and ozone on concentrations of the phenolic glycosides salicortin and tremulacin in immature and mature foliage of the trembling aspen (*Populus tremuloides*) clones 216, 259, and 271. Elevated CO_2 increased and elevated ozone decreased concentrations of both compounds in immature foliage, and tremulacin in mature leaves. Elevated CO_2 increased and ozone had no effect on salicortin in mature leaves. The ozone tolerant clone 216 had lower concentrations of tremulacin than the other clones. Effects of CO_2 and ozone on tremulacin and salicortin in immature leaves, and tremulacin in mature leaves corresponded with effects of CO_2 and ozone on the growth of insects on the same trees (see manuscript by Herms and others).

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