# Germination and early growth of crop and pasture species on media amended with two contrasting types of coal fly-ashes

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There is a renewed interest in agronomic and horticultural applications of coal fly-ash in Australia, where more than 13 million metric tonnes annually. There are conflicting reports in literature on response of plant species to fly-ash, due to wide differences in the chemical characteristics of the ashes and of the soil on which the studies were undertaken. In this study we tested fly-ashes from a sub bituminous coal (brown ash) and bituminous (grey ash) at rates of between 0 and 20 Mg/ha on germination, pigment concentration and early growth of four dicotyledonous and two monocotyledonous species. Germination was not affected by fly-ash treatments, but the high salinity and boron content in the brown ash reduced growth and height of plants, even in plants where it increased concentrations of chlorophyll pigments; whereas growth was either unaffected or enhanced by grey ash. Other detailed growth and physiological responses will be presented and discussed.

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