

EFFECT OF FLY ASH EXTRACT ON SEED GERMINATION AND SEEDLING GROWTH OF GARDEN PEA

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Abstract: Fly ash disposal and utilization shall continue to be an important area of national concern due to India's dependence on thermal power generation for its energy supply. Fly ash accumulation creates environmental pollution and health hazards. Due to increasing environmental concern and growing magnitude of the problem it has become imperative to manage fly ash. Fly ash is rich in many macro and micro plant nutrients. In laboratory bioassays, the influence of different concentrations (0, 25, 50, 75 and 100%) of fly ash extract was studied on seed germination and seedling growth of Azad P₁, E₆, Arkel and PSM cultivars of *Pisum sativum* L. Pea varieties responded positively to fly ash aqueous extract. Fly ash aqueous extract with increasing concentration (25-75%) stimulated the seed germination and seedling growth as compared to control. Maximum stimulation was recorded for root and shoot length and their dry matter accumulation at 50% extract concentration. Extract concentration above 75% significantly inhibited the early growth. Stimulation of early growth of garden pea by fly ash extracts points towards its utilization for soil amendments.

Keywords: Disposal, Fly ash, Germination, Growth, Nutrients

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