



## Effect of flyash on the physio-chemical properties of soil health and mustard crop

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**Abstract :** The study was conducted at the Soil Science and Agriculture Chemistry Research Farm, School of Forestry and Environment, Sam Higginbottom Institute of Agriculture, Technology and Sciences (Formerly Allahabad Agricultural Institute Deemed University), Allahabad during the years 2008 and 2009 in the *Rabi* season to study the effect of flyash on the physio-chemical properties of soil health and mustard crop. The best treatment combination for growth and yield attributes during both years was observed in S<sub>2</sub>F<sub>2</sub> (Flyash @ 10 t ha<sup>-1</sup>+ N<sub>80</sub>P<sub>60</sub>K<sub>40</sub>+ S<sub>10</sub> kg ha<sup>-1</sup>). Maximum concentration of heavy metals was observed in T<sub>4</sub> (Flyash @ 15 t ha<sup>-1</sup>) but was under the permissible limit (Ar 3.9, Cd 37, Cr 300, Pb 400, Mn 1800, Ni 1600). T<sub>11</sub> (Flyash @ 10 t ha<sup>-1</sup>+ N<sub>80</sub>P<sub>60</sub>K<sub>40</sub>+ S<sub>10</sub> kg ha<sup>-1</sup>) showed the best treatment combination in terms of cost benefit ratio. Therefore it can be concluded that there is an ample scope for safe utilization of industrial waste that is flyash in combination with chemical fertilizers for improving soil fertility, growth and yield of mustard.

**Key Words :** Flyash, Physico-chemical properties, Soil health, Mustard

**View Point Article :** James, Abhishek, Thomas, Tarence and Kumar, Sushil (2014). Effect of flyash on the physio-chemical properties of soil health and mustard crop. *Internat. J. agric. Sci.*, **10** (2): 576-582.

**Article History :** Received : 14.09.2013; Revised : 01.04.2014; Accepted : 16.04.2014

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