

Effect of cobalt, boron and molybdenum at different fertility status on organic carbon and total nitrogen in soil after crop harvest of pea (*Pisum sativum* L.)

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ABSTRACT : A pot experiment was conducted during the winter season of 2008-09 and 2009-10 to study the interactive effect of cobalt, boron and molybdenum on organic carbon and total nitrogen in soil after harvest of pea at fertility level F₁ (30 mg P₂O₅+20 mg S+2.5 mg Zn, per kg soil) and F₂ (60mg P₂O₅+40 mg S+5.0 mg Zn+ 2 mg Co+ 1 mg Mo, per kg soil). Nitrogen 20 mg per kg and potassium (K₂O) 30 mg per kg were applied to all the pots at uniform rates. Foliar application of boron was done after 45 and 60 days of sowing. The finding of the study revealed that treatment effect had significant superiority over control. Increasing levels of soil fertility contributed significantly in organic carbon buildup of the soil. Organic carbon content further enhanced with the application of cobalt, boron and molybdenum. Significant interaction was observed between fertility levels and micronutrients. After harvesting of crop, total nitrogen content of the soil was found to increase with increasing levels of soil fertility. Application of cobalt, boron and molybdenum had no significant effect on nitrogen concentration after crop harvest as most of nitrogen was consumed for vegetative growth of plant and during post-harvest nodules were decayed.

Key Words : Micronutrient, organic carbon, total nitrogen, fertility status, pea.