Humic and Fulvic acids: The Wonderful Gift of Nature for our Modern Green Farming

Abstract : The most valued part in organic matter, *viz.* well decomposed FYM or compost, is humus, a chemically identifiable and stable product, outcome of microbial metabolites which is made up of fulvic acid, humic acid and humin. Fulvic acid is a product of further oxygenation and degradation of soil humic substances and has higher total acidity, hydroxyl and alcoholic-OH content but lower aromatic in nature than the latter two. One of the most prominent features of humic substances is its complex formation through the functional groups with polyvalent metal ions, *viz.* Cu^{2+}, Zn^{2+}, Mn^{2+}, Co^{2+} Fe^{2+} etc. Such complexations improve their stay time in the rhizosphere and at the same time plant availability by cutting down of losses from the nutrient bowl. A glass house experiment with maize as test crop revealed that the apparent zince recovery percentage values as well as efficacy followed the order Zn-fulvate>Zn-humate-fulvate≈Zn-humate > $ZnSO_4$.