Effect of Organic and Inorganic Amendments on the Performance of Darjeeling Mandarin Orange (Citrus Reticulate Blanco)

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Abstract—*Citrus is one of the most important fruit crops in India. The most important citrus cultivars in India are mandarin (Citrus reticulate Blanco), followed by sweet orange (Citrus sinensis Osbeck) and acid lime (Citrus aurantifolia Swingle). It is also one of the important fruit crops of Darjeeling hills. Commercial citrus group like Darjeeling mandarin are grown in all the three subdivision of Darjeeling hills. Thirteen combination of organic and inorganic fertilizer along with Zinc, Boron was applied .Treatment13 i.e. NPK (RDF), 300:250: 300g/tree along with Zinc 250gm/tree ($ZNSO_4$), Boron50gm /tree (Borax) with pig manure, Vermicompost and FYM gave better result in all aspect of plant including fruit yield and quality followed by T_{12}, T_{11}, T_{10}, T_4, T_3 T_2, T_8, T_9, T_7, T_6, T_5 and lowest was recorded in T_1 (control). The nutrient input significantly increased the plant height of mandarin with nutrient inputs over the control i.e. with no input (T_1) and Further nutrient treatments (T_2-T_{13}) recorded significantly higher plant height, Organic and inorganic with micro nutrient was applied which helped the proper mobilization of nutrient as organic matter makes it possible for more of rainfall to penetrate into the soil and efficient utilization by crop in high rainfall area. So this proves that integrated approach of fertilization seems to be better for Darjeeling mandarin.*