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## Influence of plant growth regulators and *Azospirillum* on rooting of air layers in guava (*Psidium guajava* L.)

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**ABSTRACT :** Investigation was carried out on air layering in guava as influenced by growth regulators and *Azospirillum* was carried out in the Orchard, Department of Horticulture, Faculty of Agriculture, Annamalai University, Annamalai Nagar during 2013-14 aimed to find out suitable root inducing treatment in mature shoot air-layers of guava cv. L-49. There were 14 treatment combinations with three replications laid out in Randomised Block Design. In general, both growth regulators viz., IBA, NAA alone and in combination with *Azospirillum* favoured rooting in air-layers. Among the different combinations, the layers which had received *Azospirillum* 37.5g + IBA (Indole butyric acid) 3000 ppm + NAA (Naphthalene acetic acid) 3000 ppm (T<sub>12</sub>) recorded significantly higher percentage (91.68%) of rooting with desirable root characters such as higher number of primary and secondary roots, longer length of primary roots and higher girth of primary roots. Next to this treatment, the other favorable treatments were IBA, 3000 ppm + NAA, 3000 ppm (T<sub>6</sub>), IBA, 2000 ppm (T<sub>1</sub>), *Azospirillum* 37.5g + IBA, 4000 ppm (T<sub>8</sub>), *Azospirillum* 37.5 g + IBA, 6000 ppm (T<sub>9</sub>), *Azospirillum* 37.5 g + IBA 2000 ppm + NAA 2000 ppm (T<sub>11</sub>). The use of medium concentration (3000 ppm) of both the growth regulators (IBA and NAA) with *Azospirillum* 37.5g was more effective as compared to either lower (2000 ppm) or higher (6000 ppm) concentrations of IBA and NAA.

**KEY WORDS :** Plant growth regulator, *Azospirillum*, Guava, Rooting

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