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ROOTING PATTERN AND SOIL MOISTURE STUDIED IN TEA AND CLOVE MIXED CROPPING SYSTEM

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Mixed cropping of tea with crops such as clove, pepper, cotton and nutmeg has greater potential in the mid and low country where the existing production level of made tea is as low as 800 kg/ha. Studies on rooting pattern and soil moisture taken up in mono and mixed crop of tea and clove showed that clove in association with tea produced 15% more of root branches and 11% more of root length in the first 30 cm depth than the mono-

crop. Tea, on the other hand, showed only a low increase in root weight and number of branches. Data for roots less than 1 mm in size also showed a similar trend in respect of both clove and tea. In the entire soil depth of 90 cm, the above trend was found in different layers of the profile, clove in general producing more roots by weight, number and length in combination with tea than in mono culture. It was also observed that there is a shift in the concentration of clove roots from the lower layers to the surface in mixed cropping.

Observations on soil moisture reveals that the mixed cropped area had higher soil moisture than the mono cropped area at all three depths of the soil and at different distances from the clove.