RUBBER CULTIVATION IN ALKALINE SOILS OF DOOARS AREA OF WEST BENGAL: A REPORT ON GROWTH OF YOUNG PLANTS

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High soil pH affects sustainability of tea crop adversely and it deteriorates the tea quality. There are large areas under tea plantations where soil pH is not suitable for its growing. Cultivation of rubber would be an alternate approach to use this land profitably. Growth of rubber plants in high pH (7.9) soil was higher than that of normal pH (5.4) during immature period which may be due to extra care taken in the form of application of additional organic manure to the plants of high soil pH. Variation in girth of different clones gave an opportunity to screen better adapted clone(s) under such type of soil. In general, chlorophyll content index and photosynthetic efficiency in high pH grow plants were lower than that of normal soil during juvenile phase. The study demonstrated the scope of expanding rubber in the abandoned tea growing areas of high soil pH under the climatic condition of Dooars areas of West Bengal.

Keywords: Growth, *Hevea*, High pH soil, Immature phase, Photosynthetic efficiency

The soil of Dooars and Terai region of North Bengal is mainly from Glacial deposits of Himalayan range where tea is growing luxuriously and is giving high-quality Made-Tea. In general, tea grows in acidic soil of 4.5 to 5.5 pH and pH beyond 6.0 or above push down the quality of tea (Ghosh-Hajra, 2001). There are large areas lying vacant inside the tea estates where the soil is either sodic/or stony or low-lying lands (Chakraborty and Dutta, 2013).

These soils are developed from the rivers that originate from Bhutan hills. There are mines of dolomite in Bhutan hills which is being blasted by the cement factories. Being a heavy rainfed area, the river water brings dolomite washouts along with pebbles during rainy season. Because of these dolomite deposits, the soil of the tea gardens near to the river belt became alkaline. Hence, tea cultivation is abandoned in such soil (Chakraborty and Dutta, 2013).

However, rubber being a tree crop having wide range of adaptability, this crop can be introduced in these abandoned tea growing areas. The large tea growers are benefitted by cultivating rubber in tea

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