

INVESTIGATING THE ALLELOPATHIC EFFECTS OF *Eucalyptus camaldulensis* LEAF LITTER ON GROWTH AND YIELD OF TOMATO AND BRINJAL

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Executive Summary

Eucalyptus, the controversial tree, is very familiar in Bangladesh which is generally found in crop field and road side. In parallel selection of proper crop for agroforestry system is an important task. Two separate pot experiments were conducted in the field laboratory of the Department of Agroforestry and Environmental Science, Sher-e-Bangla Agricultural University, Dhaka- 1207, during the months of October 2021 to Mid-April 2022 to observe the effect different doses of *Eucalyptus camaldulensis* L. dry leaf (0, E0; 0.25, E1; 0.5, E2; 1.0, E3 and 1.5 g, E4; eucalyptus leaf/kg soil) on growth and yield of different tomato and brinjal varieties (Tomato: BARI Tomato-14, V1; BARI Tomato-15, V2; BARI Tomato-16, V3; Brinjal: BARI Begun-1, V1; BARI Begun-4, V2; BARI Begun-9, V3). Eucalyptus dry leaf in pot soil decreased almost all the growth and yield parameters of all tested varieties of tomato and brinjal in dose dependent manner. Where the highest yield reduction was found at E4 (1.5 g eucalyptus dry leaf/kg soil) treatment in both plant. The yield reduction was 48.73% in BARI tomato-14; 49.14% in BARI tomato-15 and 35.20% in BARI tomato-16 in contrast to respective controls. Whereas the yield reduction was 45.55% in BARI Begun-1, 43.56% in BARI Begun-4 and 47.41% in BARI Begun-9 in contrast to respective controls. Here, among the tested varieties the lowest yield reduction was recorded in BARI tomato-16 and BARI Begun-4. So, these varieties might be included with eucalyptus based agroforestry system. But it is better to avoid such combinations in agroforestry system.

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