

Selection of Climate Resilient Tea Cultivars for Uva Region

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Tea being a highly climate sensitive plant, the climate change drastically affects on its productivity. Therefore, an experiment was conducted to identify climate resilient tea cultivars specifically for Uva region. Two standard cultivars (TRI 2023 – drought susceptible and TRI 2025 – drought tolerant) and five accessions (17, 89, 199, 208 and 243 taken from the upcoming series) were evaluated for C stocks, N stocks, yield components and physiological parameters. C stock, N stock, weight of shoots per unit area and dry weight per shoot, photosynthetic rate, leaf temperature, stomatal conductance, transpiration rate, relative water content and water use efficiency were significantly differed among cultivars. The climate resilient ability of these cultivars was statistically analyzed using cluster analysis. Two accessions (199 and 17) were clustered with TRI 2025 showing the highest C and N stocks while having higher dry weight per shoot, weight of shoots per unit area, relative water content and water use efficiency. Other three accessions (89, 208 and 243) were clustered together and appeared in an intermediate group. No any cultivar was clustered with TRI 2023. According to early results, TRI 2025, accessions 199 and 17 can be considered as climate resilient and the accessions 89, 208 and 243 can be suggested as intermediately climate resilient. The climate resilience ability of TRI 2023 is appeared to be very poor. Experiment will be repeated to confirm these results.

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