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Evaluation of Different High Tunnel Protection Methods for Quality Banana Production in Bangladesh

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Abstract : High tunnels can provide several benefits to horticultural crops, including environmental stress protection such as hail, frost, excessive rainfall, and high wind. In hot and sunny areas, high tunnel is one of the cooling ways for modifying the microclimate and maximizing crop development. Present study was carried out to assess the effect of different type of high tunnels on banana growth, yield, and fruit quality characteristics. Net houses, poly net houses, UV poly shed houses, and open field (control) conditions are among the experimental treatments. The results revealed that the plants produced in the poly net house condition had maximum pseudo stem height (171.00cm), stem girth (68.66 cm), chlorophyll content (57.63), number of fruits (140), number of hands (9.66), individual fruit weight (125.00) and pulp: peel ratio (3.35) of bananas as compared to the other treatments. Quality parameters like total soluble solid (21.78°Brix), ascorbic acid (10.24 mg/100g), total sugar (25.44%), and reducing sugar (15.75%) were higher in fruits grown in poly net house. The study revealed that the poly net house is the best growing environment for bananas in terms of growth, yield, and quality attributes.

Keywords : shed houses, banana, chlorophyll content, fruit yield, quality
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