

CURRENT STATUS OF POLYTUNNEL GROWERS IN MAHAWELI SYSTEM H IN SRI LANKA

H.A.S.D.R. Jayawardhana¹, A.M.A.U.K. Abeykoon² and D.A.U.D.
Devasinghe¹

¹*Department of Plant Sciences, Faculty of Agriculture, Rajarata
University of Sri Lanka, Anuradhapura, Sri Lanka.*

²*Agriculture Division, Residential Project Office, Mahaweli Authority,
System H, Thambuttegama.*

The lack of assessments regarding polytunnel farming in the Dry Zone of Sri Lanka highlights the need for a comprehensive survey to identify challenges, research priorities, and training needs for the development of *Mahaweli* system H. Therefore, a survey was conducted using a structured questionnaire among randomly selected 50 polytunnel growers in the *Mahaweli* System H. The data were analysed using descriptive statistics through SPSS 23 and MS Excel 2021. According to the findings, the age of 70% of polytunnel cultivators ranged below 50 years, with 34% falling within the 41–50 age range. Remarkably, 22% of respondents engaged in polytunnel farming possessed a bachelor's degree qualification. Female representation among cultivators was minimal, comprising only 12%. Many farmers (54%) were full-time growers, earning an average monthly income of LKR 129,500±7892. Poly tunnels ranging from 1000–2000 ft² were used by 76% of growers, with 84% of these poly tunnels having a chimney-type top vent and 72% were having a plastic mulch for the floor. Capsicum was cultivated in 69% of the poly tunnels. Furthermore, 54% of farmers cultivated their crops in soil-based beds indicating less adoption of soil-less crop production systems. Mist nets (60% growers) and shade nets (44% growers) were used to lower the internal temperature. Moreover, 88% of growers had access to agro-wells, and 80% utilized drip irrigation for watering, with 58% of them were using fertigation systems. Only 4% of farmers used only organic fertilizers. Among pests, mites and mealybugs were significantly reported, resulting high pesticide uses by all farmers. Despite financial satisfaction, only 42% had recovered construction costs. The main challenges included pest, disease prevalence, and heat-related flower dropping. Therefore, the findings highlight the necessity of interventions in pest and disease management, irrigation strategies, and technological advancements to enhance the productivity and sustainability of the polytunnel growers in the area.

Keywords: Crop production, Pest management, Polytunnel farming, Sustainability, Technological advancements