

TS is a metric that is used to identify the quality of solutions by determining the quantity of mineral dissolved in water. A TDS meter (model D272, Henan Wanbang EP TECH Co., Ltd., Liangyuan, China) is normally employed to identify the total dissolved solids of a solution, which is usually water.

TDS may be estimated based on EC observations as dissolved ionic solids like salts and minerals increase the conductivity of a solution. In Swamp-Kohl, the highest EC range was held at 0.8-1.0 MS/cm in the initial 10-15 days and 1.2-1.8 MS/cm in the rest of the growth period (Teodor et al., 2021). In case EC values were high, water was added to reduce EC values, and in situations where EC values were low, more nutrient solution was added to increase the conductivity. Swamp cabbage has seasonal changes in PH and electrical conductivity..

## 2.6 Seed germination, Seedling emergence, transplanting, and crop management

The germination of seeds was done in blocks of sponges soaked in water and placed in plastic trays and then covered overnight to maintain moisture (Figure 3). The seedlings emerged in a window of two days, and the germination rate was approximately 97 per cent (Figure 4) for all cultivars. The germination was followed by the addition of a dilute nutrient solution that would help to promote early plant growth.

On 26 May 2023 the healthy and evenly grown ten-day-old seedlings were relocated to the Nutrient Film Technique (NFT) system. Regular intercultural intervention was done to maintain uniformity in growth by routine gap filling, system sanitation and plant monitoring.



Figure 3 Seed placement for germination



Figure 4 Seedling emergence