

ABSTRACT

Microgreens are soft juvenile greens, 2.5–7.6 cm (1– 3 in.) tall. Microgreens are harvested 7–14 days after germination and sold with the stem and attached cotyledons (seed leaves) depending on the species. Despite their small size, these microgreens hold dense concentration of micronutrients and phyto-chemicals. Hence the present study was conducted with the objective to determine the optimal growth conditions for cultivation of microgreens, nutritional profiling, formulation and acceptability of microgreen based recipes. Six types (N=6) of microgreens were selected for the conduct of study. The mustard, radish, chia, sesame, fenugreek and beetroot microgreens were selected. Initially a pilot study was conducted using mustard microgreen, to determine the best growing media, watering method and lighting condition suitable for the growth of microgreens. The cocopeat medium under indirect lighting and top watering method was optimal for growth of microgreens and hence all the selected six microgreens were cultivated using the optimal condition. The growth was monitored and compared in terms of weight, leaf size and stem length on each day (upto 7 days). The analyzed micronutrient and phyto-chemical concentration of the microgreens was superior than their mature counter parts (regular greens). The heavy metal content was low and the microgreens were safe for consumption. The shelf life was also determined using different storage containers under different conditions. Recipes (N=80) were formulated using microgreens and sensory evaluated to determine the overall acceptability. The nutritional composition of the recipes was also determined. The Knowledge, Attitude and Practices (KAP) on Microgreens were assessed among the selected subjects (Self Help Groups - Kudumbashree) (N=81) and awareness was created through live training sessions. Pre and post awareness, knowledge assessment was done to determine the impact of awareness. The subjects scored better in the post awareness assessment and it was understood that the awareness was effective and a positive impact was noticed. Hence efforts need to be made to spread the awareness of microgreens among the public to cultivate and consume them. This will provide an economic means to partake adequate nutrients.