

EVALUATION OF SUITABLE SPACING OF CABBAGE (*Brassica oleracea* .L) FOR CONSUMER PREFERABLE HEAD YIELD IN THE UP COUNTRY INTERMEDIATE ZONE

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BY

ARUMUGAM ELANGESWARAN



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ABSTRACT

An experiment was conducted at the Regional Agricultural Research and Development Center, Bandarawella during the period January to May 2014 to study the effect of different plant spacings on growth and yield of cabbage and suitable consumer preferable head yield for cabbage (Green coronet) in Badulla District. Preliminary social survey was conducted to identify the preferable head size of cabbage by seller and consumers. The field experiment was conducted to study the effect of spacing. There were five treatments namely 50 x 40 cm, 50 x 30 cm, 40 x 40 cm, 40 x 30 cm and 30 x 30 cm. The treatments were arranged in Randomized Complete Block Design (RCBD).

Results from the social survey indicated that the most consumer preferable head weight was 750 -1000(g). Medium size of heads was preferred by 84% of the sellers. Also more than half of (64%) of consumers selected medium size. Most of the consumers and sellers (84%) faced problem in large size of heads in cabbage. Majority of (72%) sellers and consumers faced problem in high weight of heads.

The field experiment showed that the plant spacing had significant influence on growth and yield of cabbage. Highest plant height, insect damage, length of root/plant, dry weight of root/ha and leaf area index were obtained at the lowest spacing of 30 x 30 cm (highest plant density of 1, 11,111 plants/ha). However, canopy diameter, weed infestation, dry weight of weeds/m² and diameter of head were highest at the widest spacing (decreased with increasing plant densities). Highest weight of head per plant was obtained at the widest spacing 50 x 40 cm (at the lowest plant

density of 50,000 plants/ha). Highest marketable weight of head/ha was obtained at the closest spacing of 30 x30 cm (1, 11,111 plants/ha). Optimum weight of head/ha was obtained at a spacing of 40 x 30 cm (density of 83,333 plants/ha) with preferable head size.

The results suggest that most preferable head weight by the consumer was 750 - 1000(g) (medium size) and higher weight/head was obtained at the spacing of 40 x 30 cm (suitable density of 83,333 plants/ha). Selection of 40 x 30 cm is better choice for cultivation of cabbage by the farmers in the Badulla district.

Key words: Cabbage, plant density, plant spacing, head yield, head size

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