

## [P2] Farming System

Thu. Sep 9, 2021 12:15 PM - 2:00 PM Room 2 (Poster) (Farming System)

1:15 PM - 2:00 PM

### [P2-26] Effects of Proximity to Missing and Poorly Growing Plants on Cabbage Head Size

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The objective of this study was to characterize the weight variation of cabbage heads in the field by estimating cabbage size variation and the number of cabbages that were larger than the standard size from the rates of missing and poorly growing plants in the same field. Cabbage seedlings were transplanted on May 24, 2019, in Experiment 1 and on July 8, 2019, in Experiment 2. Three weeks after planting, the positions of missing plants and poorly growing plants were recorded. The results of Experiment 1 categorized plants into six groups as follows: plants that grew poorly at 3 weeks after planting and had a head weight at harvest (1) less than the threshold, i.e., average  $-2SD$  (P1), or (2) more than the threshold (P2); and plants with normal growth at 3 weeks after planting and were next to (3) missing plants (Nm), (4) poorly growing plants (Np), (5) normal plants with a head weight at harvest less than the threshold weight (NN1), and (6) normal plants with a head weight more than the threshold weight (NN2). The average values and coefficients of variation were determined. In Experiment 2, cabbage head weight and plant numbers were investigated. The plant number of each group and distribution of head weight in Experiment 2 were estimated from the number of missing and poorly growing plants in Experiment 2, and the parameters corresponded to the results of Experiment 1. Accordingly, we could successfully determine the exact number of cabbage heads bigger than the standard size.