

# Effect of Cycocel and Alar on growth and yield of Okra

" *Hibiscus esculentus* L "

MSc Thesis of Horticulture Science

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## Abstract

This experiment was conducted in the experimental field of the department of Horticulture, college of Agriculture, University of Baghdad during the growth season 1998 to study the effect of cycocel and alar at concentrations (0, 1000, 2000) mg.L<sup>-1</sup> for both of them on the growth and yield of okra c.v. btera. Spraying was carried out once or twice or three times during different stages. Split plot design was implemented with three replicates. The result of this study was as follows:

The treatment of cycocel reduced plant height, percentage of dry weight of leaves, and the length of internodes, while increased the number of leaves, branches and the diameter of main stem. The treatment of alar reduced plant height, number of leaves . plant<sup>-1</sup>, length of internodes and percentages of dry weight of leaves, and increased number of branches in plant and diameter of main stem.

Spraying the plants with cycocel at 1000 mg.L<sup>-1</sup> once or twice increased number of branches and leaves in plant, main stem diameter, leaves contents of N, P and total content of chlorophyll compared with other treatments, while increasing the number of sprays to three times with cycocel decreased these parameters especially with 2000mg.L<sup>-1</sup>.

Spraying of cycocel or alar at 1000 mg. L<sup>-1</sup> increased number of flowers in plant, and cycocel decreased the percentage of aborted flowers.

Increasing number of spraying of cycocel and alar three times reduced number of flowers in plant especially with 2000 mg.L<sup>-1</sup>.

The number of pods in plant was increased when plants sprayed with cycocel at 1000 mg. L<sup>-1</sup>, while decreased at 2000 mg. L<sup>-1</sup>. Spraying the plants with alar reduced number of pods in plants and total yield at both concentrations.

Spraying cycocel or alar once on plants at 1000 mg. L<sup>-1</sup> respectively increased number of pods in plant and total yield, while increasing number of sprays to three times reduced the number of pods in plant and total yield. Treated plants with cycocel and alar reduced weight, length and diameter of pods.

Cycocel increased protein content and decreased fibers content in pods.