

Effects of Flooding Stress on Growth and Yield of Cucumber (*Cucumis sativus* L.) and Cabbage (*Brassica oleracea* L. var. *capitata*)¹

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summary

To study the response of growth and yield of cucumber and cabbage crops under flooding stress environment, the flooding experiments were conducted in 1991 and 1992.

In cucumber, there was no significantly difference in 1991 experiment. The percentage of survival plants, leaf numbers and yield were not significantly affected by flooding for 6, 12 and 24 hours at different growth stages; however, in 1992, the percentage of survival plants, leaf numbers and yield were significantly decreased by flooding. The yield was decreased 75.8% and 45.5% for flooding 24 hours at early and middle stages, respectively. There was no difference for ratio of non-marketable fruit in the two year experiments. The different response maybe was caused by the typhoon and heavy rain following the flooding treatment in 1992 experiment.

In cabbage, flooding within 24 hours at different growth stages did not cause plant death, but it reduced the plant growth. Flooding at early growth stage reduced the growth. The plants were recovered lately, however, there were no difference among treatments during harvest time. Plant growth was retarded by flooding at late growth stage, and yield was decreased to 88.6% compared with flooding at early growth stage. In 1991 experiment, yield was decreased 2.6%, 7.8% and 8.9% by flooding for 6, 12 and 24 hours compared with flooding for 0 hour, respectively. In 1992 experiment, the yield was decreased 3.5%, 5.0% and 10.0% with the same treatments, respectively.

(Key words: Cucumber, Cabbage, Flooding stress, Water damage, Yield, Quality)

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