Effect of defoliation on yield and water use efficiency of maize (Zea mays L.)

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Because of the low soil fertility of the region, maize yields were low. To improve yields, a study was conducted to determine the effect of defoliation on yield and water use efficiency of maize (Zea mays L.).

Methodology

The experiment was conducted on a field plot measuring 100 m x 100 m. The field was divided into 25 plots, each measuring 20 m x 20 m. The plots were arranged in a randomized complete block design with three replicates.

Defoliation treatments were applied at different stages of the maize growth cycle. The treatments included:

1. Control: No defoliation
2. Partial defoliation: 50% defoliation
3. Complete defoliation: 100% defoliation

Each treatment was replicated three times.

Results

The results showed that partial defoliation significantly increased yield and water use efficiency compared to the control and complete defoliation treatments. The highest yield and water use efficiency were observed in the partial defoliation treatment.

Discussion

The results suggest that defoliation can be used as a management tool to improve maize yields and water use efficiency. However, further research is needed to determine the optimal defoliation timing and intensity for maximizing yield and water use efficiency.

References