CONTROL OF BACTERIAL STALK ROT OF CORN 
BY CHLORINATION OF WATER IN 
SPRINKLER IRRIGATION

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BACTERIAL stalk rot (3) which causes damage to corn 
(Zea mays L.) after sprinkler irrigation with water 
from farm ponds often occurs in North Carolina and other 
areas. Affected plants soften rapidly and decay and stem 
and leaf tissues collapse. Plants usually die, but if only a 
small portion of a plant is affected it will remain standing. 
Total damage is generally slight because only a small per-
centage of plants become infected, apparently at random. 
In some fields, however, large percentages of plants have 
been lost. The loss of relatively few plants in research, 
demonstration, and other valuable plantings can be very 
serious. Sabet et al. (4) compared the North Carolina 
causal organisms with isolates causing bacterial stalk rot 
of maize in Egypt and concluded that there were no signifi-
cant differences. They named the pathogen Erwinia 
vora f. zeae Sabet.

In 1958, one research planting among such fields for yield purposes was abandoned because of bacterial stalk rot following sprinkler irrigation. The trial was primarily of tester crosses and was identical to experiments grown at other locations (5). At irrigation most plants were in the early tassel stage and average of 51 plants of each entry were measured for ear height. Means for plants infected and percentage of infected plants

Subsequent exploratory studies gave no conclusive indications of inherent resistance among the component inbreds or of the crosses. Apparent susceptibility of the low-ear types could be due to the compact growth habit of these types which may have provided a more favorable environment for infection by the bacterium. Further study is needed to determine if inherent resistance exists in corn and if breeding for resistance is possible.

<table>
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<tr>
<th>Type cross</th>
<th>No.</th>
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