well; a soil that is fertile so that
the plants are well nourished,
and practice early sowing so that
the crop can develop and ap-
proach maturity before the high-
er summer temperatures or late
drouth may occur. These are
factors which together with the
use of a good variety will assure
the most satisfactory yield.

Bimits Affect Barley Production
By
W. E. Brentzel

North Dakota has taken a leading place in the production of
barley in the United States. This favored position which our
state now enjoys was obtained because of a combination of
circumstances affecting not only the market but also the produc-
tion of barley in other regions. A number of important diseases
have increased in the barley growing regions and have reduced
profitable returns to such a marked degree as to affect materially
the desire on the part of growers to produce barley. Barley blights
have attracted considerable attention in other states and these
same diseases may become destructive in our own State. There are
several different types of blight which affect the yield and market
quality of barley. They have three avenues of approach to the
growing plant, (1) through the seed, (2) through the soil from
soil infestations and (3) through air currents which bring in the
infecting germs from a more or less distant source. This report is
largely concerned with the blights which originate from the seed
but deals to some extent with blight originating from the soil.

Blight generally is considered
to be some disease of the seed
which causes a measure of shriv-
eling and impairment of germin-
ation, accompanied by a reduc-
tion in the quality and value of
barley on the market. However,
blighted seed is not always unfit
for sowing, depending upon
which blight is present. A very
common blight in barley is
caused by the fungus Alternaria.
This disease often does not shriv-
el the seed and apparently has
no effect upon the germination.
Buyers are unable to distinguish
with certainty one blight from
another without first making a
laboratory test, requiring sever-
al days. Time will not permit
this delay. Feeders of live stock
know that scabbed barley is poi-

sonous to some animals espe-
ially hogs and, as a safety measure,
they will disqualify all blighted
grain. The maltster cannot use
blighted grain and since the
feeder and the maltster are the
principal purchasers of barley
all blighted grain, regardless of
the type, may be sold only at a
discounted price.

The importance of high qual-
ity seed as a factor in barley pro-
duction has been demonstrated.
Also the value of seed disinfec-
tants for seed of lower quality
has been proven by experiments
begun in 1944. A lot of rather
light Wisconsin 38 barley was
separated into three grades by
the use of a grading machine;
namely, a heavy grade weighing

*Plant Pathologist