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Chesibb – A New Butterhead Lettuce for the Greenhouse and Outdoor Plantings
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Research Report

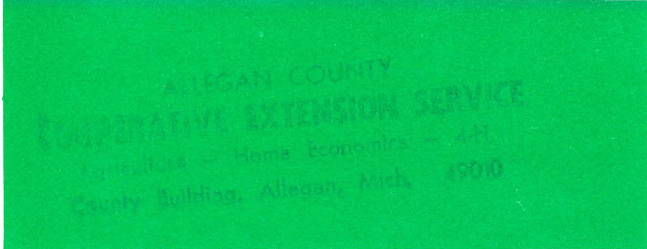
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RESEARCH REPORT

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FARM SCIENCE

FROM THE MICHIGAN STATE UNIVERSITY
AGRICULTURAL EXPERIMENT STATION EAST LANSING

ALLEGAN COUNTY
COOPERATIVE EXTENSION SERVICE
Agriculture - Home Economics - 4-H
County Building, Allegan, Mich. 49010

Chesibb—A New Butterhead Lettuce for the Greenhouse and Outdoor Plantings

By SHIGEMI HONMA and S. H. WITTEWERT

LETTUCE IS ONE of the oldest and most important vegetable crops force grown in greenhouses. It is a sizeable industry in areas where its production has been specialized. This includes Michigan, where it is grown during the fall, winter and spring months, other northern states and Western Europe.

Lettuce is adapted for growing during the colder months of the year when light and temperatures are less favorable for other greenhouse crops. The forcing of lettuce is profitable for the progressive grower only when a high grade product is marketed. Good quality and continuous availability of greenhouse

lettuce during the winter months have made it competitive with field grown head lettuce.

Leaf and butterhead are the most common greenhouse types. The most important leaf type is Grand Rapids and the most important butterhead types are Boston and Bibb. In recent years, Bibb has become increasingly popular. Although the eating quality of Bibb is excellent it grows slowly during the short cloudy days of fall and winter. Its tender leaves also shatter and bruise easily so it must be handled with great care.

The variety Chesibb, recently released by Michigan Agricultural Experiment Station, is earlier in maturity, tolerant to low light intensity and has the leaf characteristics and quality of Bibb.

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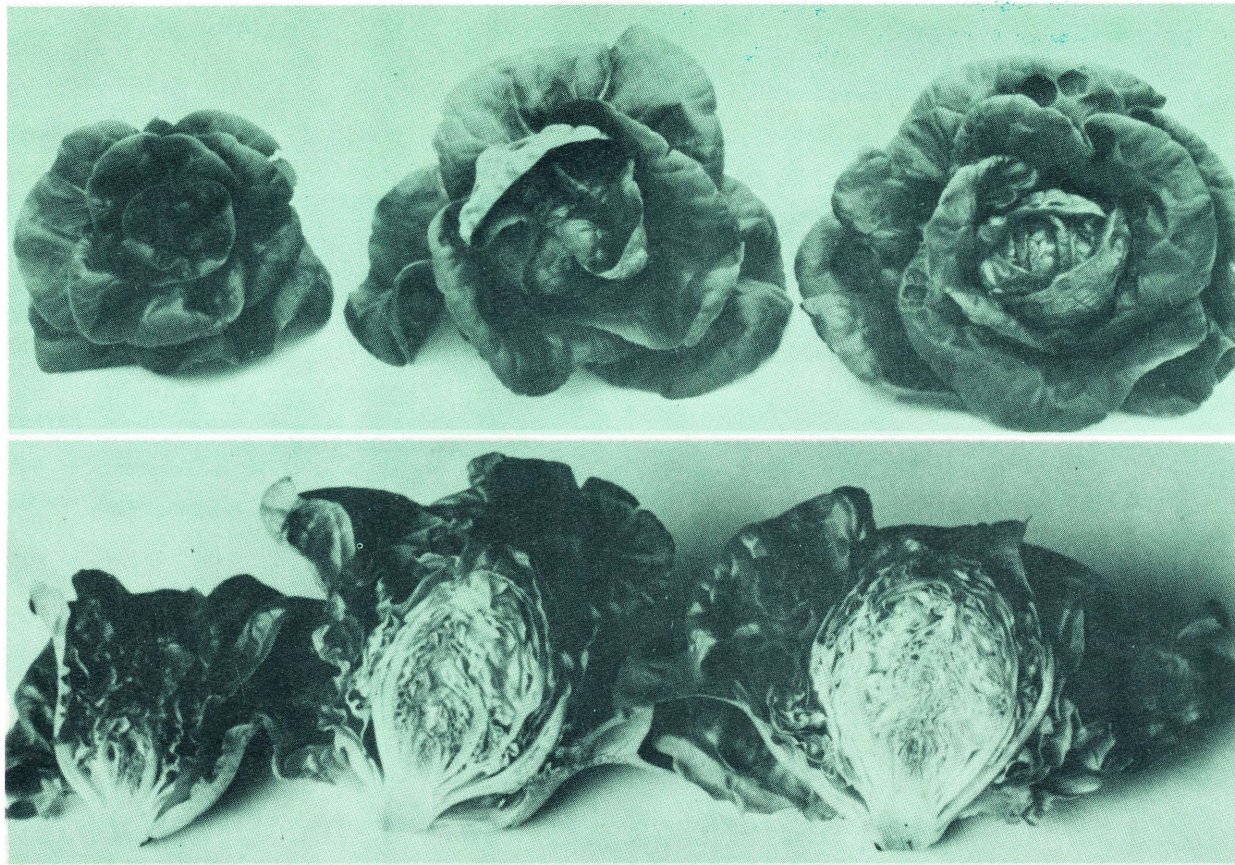


Fig. 1. Bibb (left), Chesibb (center) and Cheshunt 5-B (right).

PEDIGREE

Chesibb is the result of a breeding program initiated in 1960. The European variety, Cheshunt 5-B with desirable heading characteristics, early maturity and tolerance to low light intensity was hybridized with Bibb, a dark green leaf butterhead type. During the seven generations of inbreeding, plants were selected for earliness, vigor, head type and less shattering and bruising leaf characteristics.

DESCRIPTION

The varieties Bibb, Chesibb and Cheshunt 5-B, are illustrated in Fig. 1. The heading characteristic of Chesibb is evident although it is not as large as Cheshunt 5-B. Leaves are lighter green and less crisp than Bibb. The flavor is equal to Bibb. The lesser crispness of Chesibb makes it easier to handle at harvest and prevents the leaves from shattering and bruising.

PERFORMANCE AND ADAPTABILITY

Chesibb matures 10-14 days earlier than Bibb when grown as a greenhouse crop. It has been tested in commercial greenhouses in Michigan and elsewhere. 5-69—5M

As an outdoor crop the variety matures approximately 1 week earlier than Bibb. Commercial trials in Michigan and Ohio have shown that it is well adapted for muck soils. The vigorous growth of Chesibb begins with seed germination, continues through the seedling stage and on to maturity. It is highly productive and vigorous during the short cloudy days of fall and winter. Experimental plantings have shown a slightly heavier weight per head than Bibb at maturity.²

Limited marketing studies have shown that Chesibb was acceptable and its edible quality was rated excellent.

This new butterhead lettuce will respond favorably to the usual cultural practices as recommended for the Bibb variety. Plant spacing, fertilization and temperature requirement are similar to Bibb. Chesibb also responds to carbon dioxide enrichment up to 1500 ppm in the greenhouse atmosphere. When carbon dioxide is used, water applications should be increased. Recommended levels of nitrogen as nitrate nitrogen (NO_3) in the soil should be 40-50 lbs./A.

²Wittwer, S. H., S. Homma and W. Robb. 1964. Practices for increasing yields of greenhouse lettuce. Mich. Agr. Expt. Sta. Res. Rep. 22.