LEAF area may be damaged or partly removed by deficient soil moisture, normal deterioration with maturity, insects, diseases, and other causes (hail, etc.). Irrigation, fertilization, and other cultural practices often greatly affect the amount of leaf area developed, the amount lost, and the efficiency of the area remaining.

It is of interest to a plant breeder to be able to measure the actual inherited grain yield of a crop and the effects of other factors upon yield. It is desirable to know the amount of leaf area removal required to reduce yields and the stage in the development of the plant at which this is most critical.

The objectives of these experiments were: (1) to determine, more critically, the amount of leaf area that can be removed from winter wheat without reducing grain yields, (2) to determine the stage of plant development at which leaf removal reduces grain yields the most, and (3) to compare the effects of leaf area removal of winter oats with wheat.

REVIEW OF LITERATURE

Roebuck and Brown (5) reported that yield losses in wheat due to leaf removal were greatest when the leaves were removed seven weeks before harvest. In this experiment leaves were removed to the extent of one-half of each leaf, all leaves, and all leaves from lower half of the plants. Kiesselbach (1) clipped all the leaves from wheat plants 3, 10, and 17 days after heading. He reported that the