

EARLY COLLECTION AND IMMEDIATE SOWING INCREASE GERMINATION OF BASSWOOD SEED

Carl V. Bailey, Superintendent
Green Springs Nursery, Ohio Division of Forestry
Green Springs, Ohio

The demand for American basswood (Tilia americana) seedlings has been on the increase since 1950, but the supply available has always been limited because of very poor germination resulting from dormancy. Attempts to improve germination by various seed treatments and stratification practices failed one after another. During the course of some of these attempts it was noticed that seed picked from the trees early in the season and seeded immediately gave much better results.

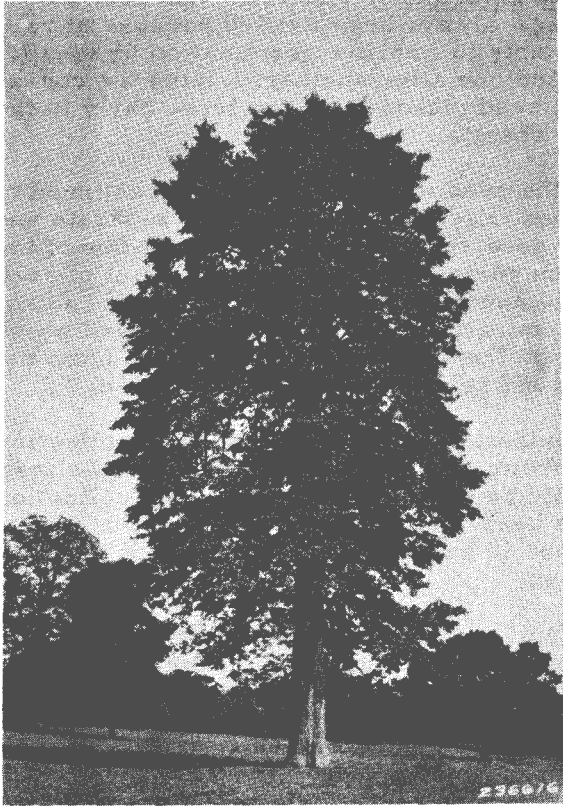
One year, seed collection was started while the seed was still green and continued at intervals until the seed had dropped from the trees. Each seed lot was kept separate and seeded within 48 hours, without permitting the seed to lose any moisture. A few of the green seed germinated. Each succeeding collection germinated better until a point of seed maturity was reached where the seed coats turned completely brown but the seed had not yet dropped from the trees. Very little if any germination was obtained from seed which had matured to the point where it had dropped from the tree or could be shaken from the tree. This was the point where all previous basswood seed collections had started.

Further experimentation indicated that germination was best when seed collection was started just as the seed coat turned slightly brown and was concluded before the seed coat became dry and hard. No definite dates could be established for the seed collection period, as it was based on the appearance of the seed coat. This seed sowed at a rate of 175 to 200 seeds per square foot produced about 30 seedlings per square foot the first year.

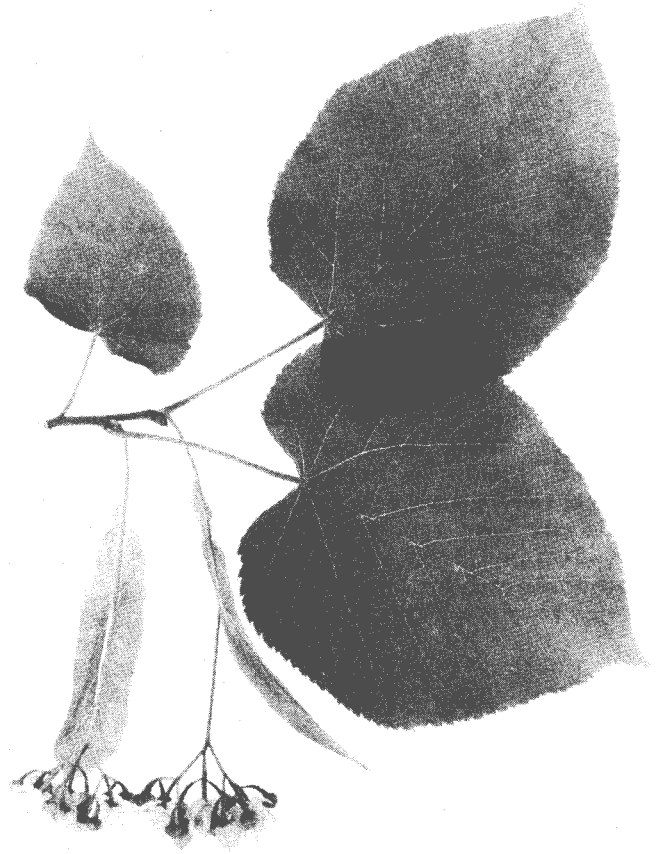
There have been occasions when weather or soil conditions did not permit immediate seeding and the seed was held in drums of water without dormancy increasing. More recently the seeds have been kept moist and held in cold storage with equally satisfactory results. There have been occasions when the seedbeds were quite dry at seeding time and it was necessary to water to keep the soil from drying out the seed.

It has been found that basswood seed in one section of the State will mature before seed in other sections, and the seed on individual trees in one area may mature before seed on other trees. Therefore, collection plans should be based largely on individual trees. Small seed collection crews traveling over a wide area were found to be most efficient in obtaining the volume of seed needed.

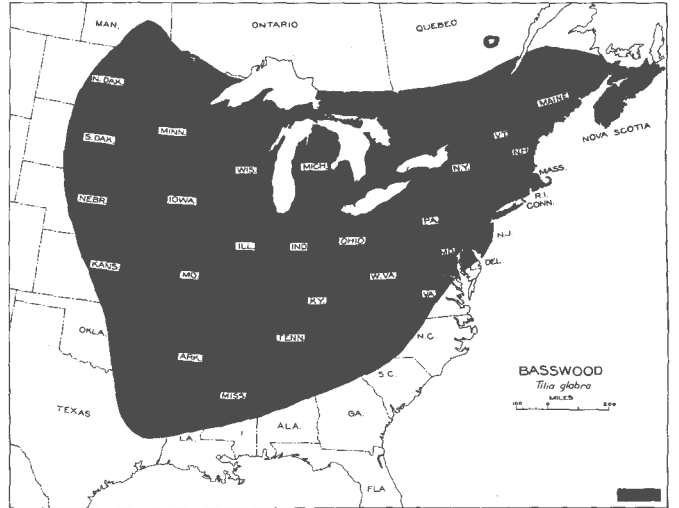
While the germination percentage under this system is still quite low, it is giving satisfactory results and providing the volume of seedlings needed to fulfill planting requirements.



A. American basswood.



B. Basswood leaves with clusters of flowers. By early autumn many of these develop into woody fruits and about the size of a pea.



C. Distribution of basswood.

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