

Triadica sebiferum (L.) Small

tallowtree

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Synonym. *Sapium sebifera* (L.) Roxb.

Other common name. Chinese tallowtree.

Growth habit, occurrence, and use. Tallowtree—*Triadica sebiferum* (L.) Small—is a small deciduous tree that attains heights of about 10 m at maturity. A native of China, the species has been widely planted in the coastal plain from South Carolina and Florida to Texas, Oklahoma, and Arkansas. The bright red fall foliage makes the tree a popular ornamental, and the seeds have some value as wildlife food. In Asia, oils are extracted from the seeds and waxes from the seedcoats for use in a wide variety of products, including diesel fuel additives, soaps, candles, and cloth dressings (Bringi 1988; Samson and others 1985; Singh and others 1993; Vines 1960). Tallowtree readily escapes from cultivation and is common along roadsides of the Gulf Coast, where many consider it a pest species.

Flowering and fruiting. Both pistillate and staminate flowers are borne on the same yellowish green spike in the spring. The fruit, ripening in October to November, is a rounded, 3-lobed capsule, 8 to 13 mm in diameter (Vines 1960). Its greenish color changes to a brownish purple at maturity (Bonner 1974). There are 1 to 3 white waxy seeds per capsule (figures 1 and 2). In India, this species bears fruit as early as the third year after planting, and mature trees can yield 20 to 25 kg (Singh and others 1993).

Collection, cleaning, and storage of seed. The dry capsules can be collected from the trees by hand after dehiscence (fruit-splitting) has started. Seeds can be removed from the

capsules by gentle flailing in burlap bags or by being run through macerators at slow speeds. On a sample of capsules from a tree in central Mississippi, the following data were obtained (Bonner 1974):

Capsules per volume	30,300/hl	10,700/bu
Seeds per weight	6,100/kg	2,780/lb
Moisture content of seeds (% of fresh weight)	6	
Sound seeds (% of total seeds)	90	

There are no known storage tests with seeds of tallowtree, but drying the sample noted above to 6% without killing the seeds indicates that they are orthodox in storage behavior. Short-term storage at low temperatures and seed moisture contents should be no problem. The seeds have a lipid content of about 20% (Zubair and others 1978), however, so sub-freezing temperatures should be used for any storage over 5 years.

Germination tests. Seeds of tallowtree are not dormant and do not typically require pretreatment. Germination results of 60 to 62% in germination beds have been reported from India (Singh and others 1993). Fresh seeds from the Mississippi collection had a laboratory germination of 38 % after 30 days on moist Kimpak at day-night temperatures of 30 and 20 EC. The seeds received 8 hours of light during the day temperature. Moist stratification at 2 EC for 34 days increased the rate of germination but did not boost the percentage. Sixty days of stratification apparently induced a deep secondary dormancy (Bonner 1974). Tallowtree can also be propagated by cuttings from root suckers (Singh and others 1993).

References

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Figure 1—*Triadica sebiferum*, tallowtree: seeds, H 2.

Figure 2—*Triadica sebiferum*, tallowtree: longitudinal section through a seed, H 6.