Monitoring Pecan Shell Hardening

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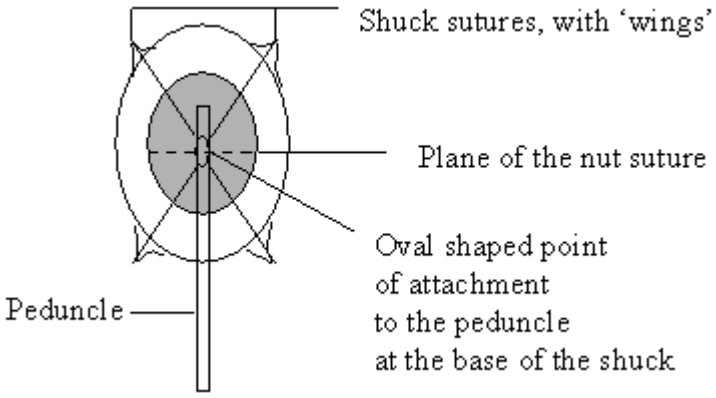
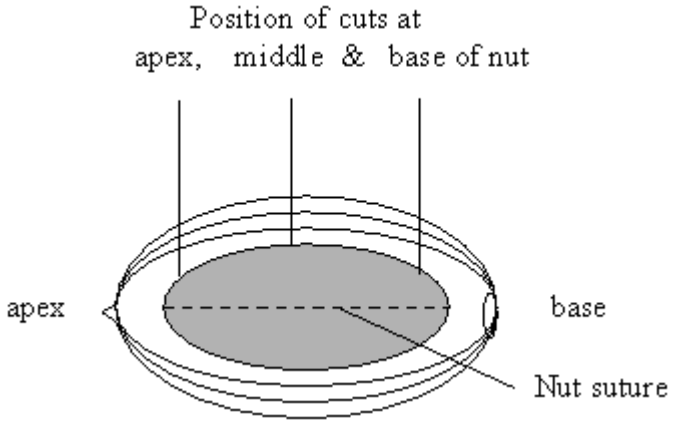
Shell hardening begins at the apex of the nut and proceeds to the base. The area around the nut suture hardens prior to to other regions of the shell. To monitor shell hardening, remove a nut, in the shuck, from the peduncle and note the oval shaped point of attachment that can be used to determine the plane of the suture: the plane of the nut suture will be perpendicular to the long axis of the oval.



Using a sharp knife, cut through the shuck perpendicular to the plane of the nut suture (thus avoiding cutting through the suture), beginning at the apex of the nut, proceeding to the middle, and finally to the base of the nut. If sufficient resistance is encountered to stop the knife, the shell has hardened. Hardening is recorded as 0=no hardening, 1=hardened at apex, 2= hardened to middle, 3= hardened to base of nut.



The best reference to shell hardening in Carya is Kaniewski, K. 1965. The development of the fruit walls in *Carya.* Annals of Botany, N.S. Vol. 29, No. 116, p.589-608.