

**FAMILY: OLEACEAE**

2006

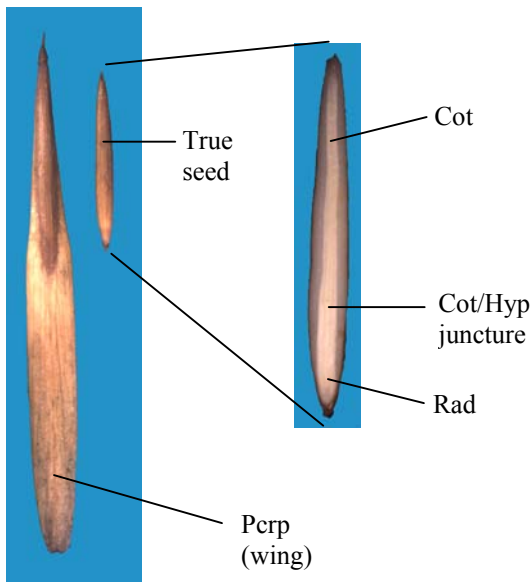
Genus: *Fraxinus*



**1. PRECONDITIONING:**

METHOD	TIME (hrs)	TEMP (°C)
imbibe on moist blotters, filter paper, or paper towels	overnight	20-25

**Morphology**



Notes: The orientation of the embryo is reversed from the expected position. The radicle is located away from the point of attachment. The cotyledons are closest to the point of attachment.

The embryos in *Fraxinus nigra* and *F. excelsior* typically extend from 1/2 to 2/3 the length of the seed at maturity. The embryos of *F. americana*, and *F. pennsylvanica* typically extend the entire length of the seed at maturity.

Fig 1 External Fruit (samara)

Fig 2 Embryo



**2. PREPARATION AND STAINING:**

METHOD	TZ Conc(%)	TIME (hrs)	TEMP (°C)
bisect longitudinally	0.1	3	30-35
cut longitudinally, adjacent to the embryo	1.0	6-24	30-35



Longitudinal cut with the seed still inside the fruit. Alternatively, remove the seed from the fruit prior to cutting. The longitudinal cut can be done off center adjacent to the embryo or the cut can bisect the embryo.

Fig 3 Preparation method

# ASSOCIATION OF OFFICIAL SEED ANALYSTS

## FAMILY: OLEACEAE

GENUS: *Fraxinus*

Post Staining Notes: None



### 3. EVALUATION:

#### VIABLE (NORMAL STAINING)

- embryo completely stained
- cotyledons completely stained
- endosperm completely stained, or stained except for small necroses on periphery

#### NON-VIABLE (ABNORMAL OR NO STAINING)

- cotyledon/hypocotyl juncture unstained
- radicle unstained
- endosperm with necroses central and close to the embryo

#### OTHER TISSUE/NOTES

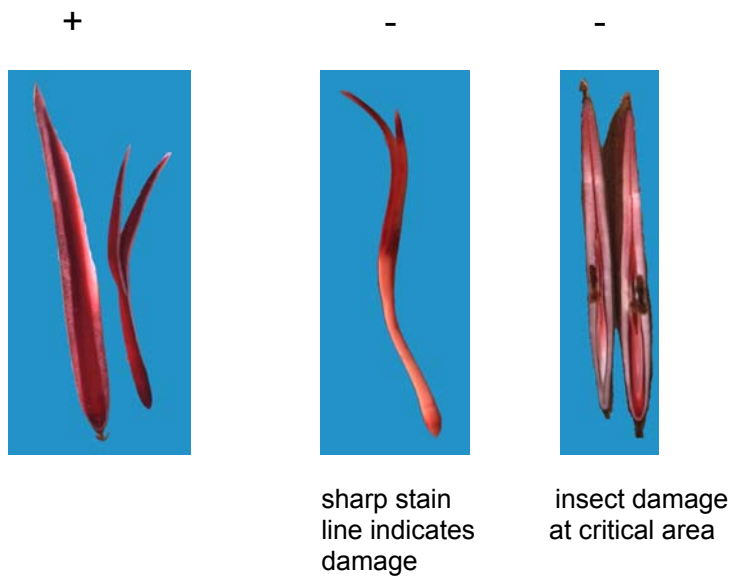


Fig 4 Seed stain evaluation

Morphology reference:

Steinbauer, G. P. 1937. Dormancy and Germination of *Fraxinus* seeds. *Plant Physiology*, 12:813-824.

Lab references: 5, 8