

FAMILY: FABACEAE II

Genera: *Acacia, Calliandra, Cicer, Dalea, Desmanthus, Hedysarum, Indigofera, Kummerowia, Lupinus, Medicago, Melilotus, Trifolium*



1. PRECONDITIONING:

METHOD	TIME (hrs)	TEMP (°C)
imbibe between moist blotters	overnight	20-25

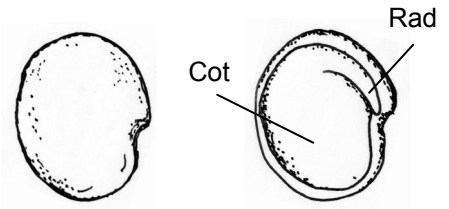


Fig 1 External

Fig 2 Embryo

Notes: Preconditioning may be omitted if hard seed are not to be tested for viability. If viability of hard seed is to be determined, scarify hard seed that are present after preconditioning (see section 5.3, 6.4, and 8.3.5).



2. PREPARATION AND STAINING:

METHOD	TZ Conc(%)	TIME (hrs)	TEMP (°C)
generally no cutting is required, however a slight cut (clip or nick) in cotyledon may be necessary.	1.0	2-72	30-35

Notes:

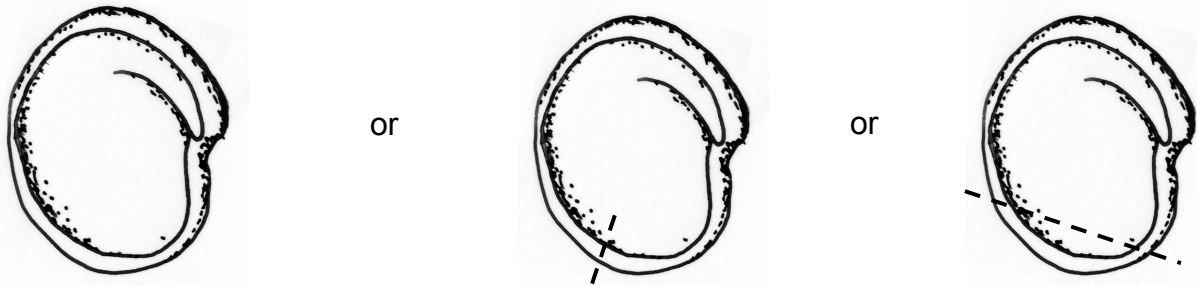


Fig 3 Preparation

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Post Staining Notes: Clear with glycerol or lactic acid for approximately one hour at 35 °C (*Trifolium hybridum* will not clear due to dark pigmentation). It may be necessary to remove seed from seed coat to evaluate all tissue.



3. EVALUATION

VIABLE (NORMAL STAINING)

- entire embryo evenly stained, turgid, and unfractured
- slight damage to radicle acceptable
- radicle stained slightly darker
- small, shallow, unstained or intensely stained areas on periphery of hypocotyl and cotyledons
- half or more of cotyledons attached to the embryo axis and evenly stained

NON-VIABLE (ABNORMAL OR NO STAINING)

- embryo completely unstained
- embryo flaccid
- unstained, deteriorated, or fractured radicle above tip of central conducting tissue
- unstained or watery, darkly-stained areas extending to inner surfaces of cotyledons
- less than half of cotyledons remaining functional and attached to embryo axis
- damage to embryo axis

OTHER TISSUE/NOTES

Seed must be examined critically for mechanical damage, especially at juncture of cotyledons and hypocotyl. Immature seed may stain unevenly, or remain green. If the embryo tissue is flaccid, the seed is non-viable regardless of the color.

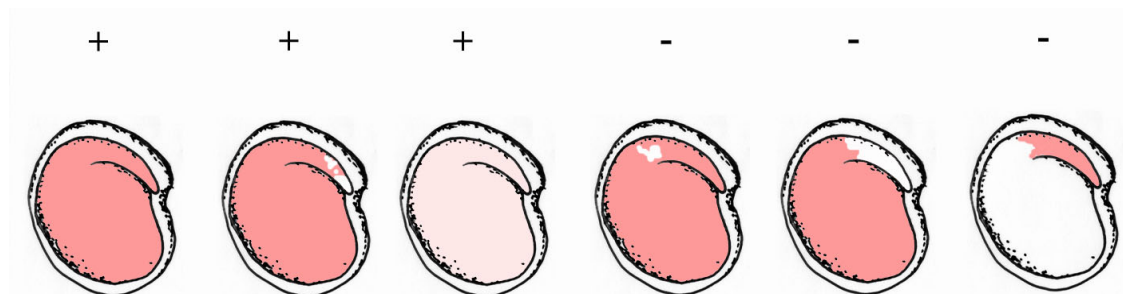


Fig 4 Seed stain evaluation

REFERENCES: 1, 2, 3, 5, 6, 7

