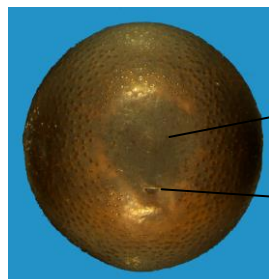


FAMILY: CANNACEAEGenus: *Canna***1. PRECONDITIONING:**

METHOD	TIME (h)	TEMP (°C)
Nick the seed coat and immerse in water, then peel outer layer of seed coat off and immerse in water again	Overnight Overnight	20-25 20-25

Morphology

Basal plug
(Rad)
Hilum

Fig 1 External

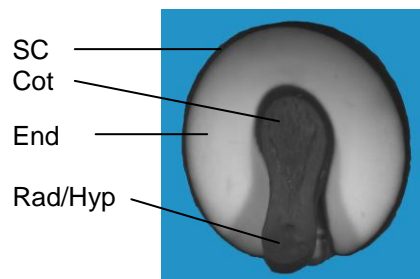
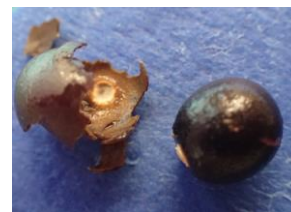


Fig 2 Embryo

outer layer of
seed coat peeled away**2. PREPARATION AND STAINING:**

METHOD	TZ Conc (%)	TIME (h)	TEMP (°C)
Cut longitudinally through the basal plug leaving enough of the seed coat intact to hold both halves together	1.0	4-6*	30-35

Note: *Embryo will stain rapidly. Endosperm may stain a pale pink if left for 1-3 days.

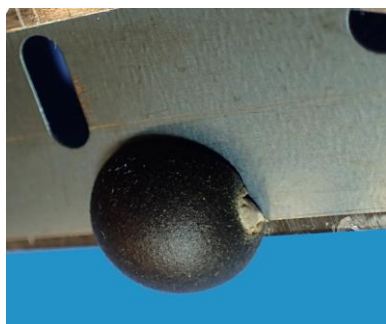


Fig 3 Preparation method

FAMILY: CANNACEAE

Genus: *Canna*

Post-staining notes: Bisect completely. Spread halves apart.



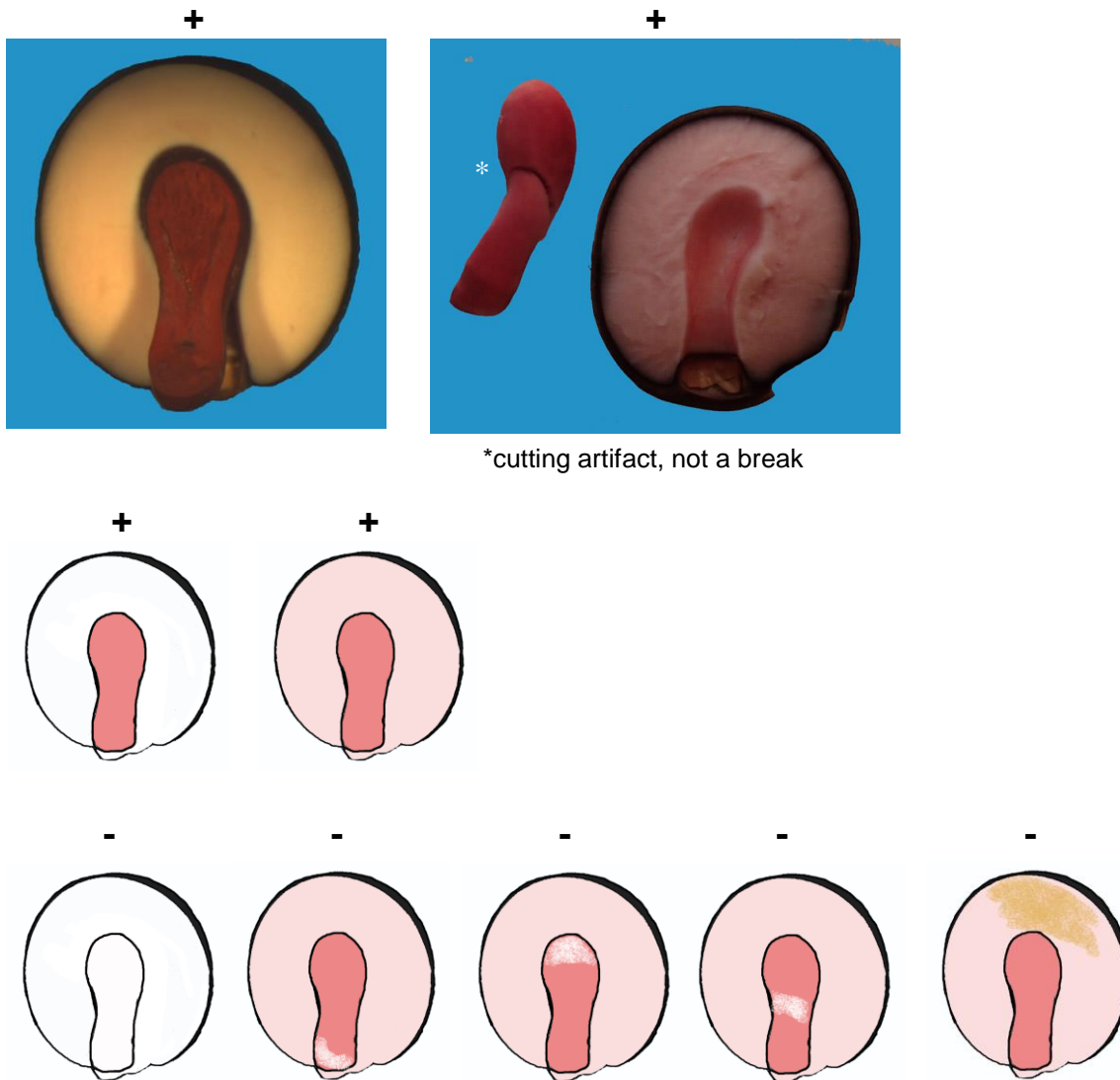
3. EVALUATION:

VIABLE (NORMAL STAINING)

- entire embryo evenly stained
- nutritive tissue must be firm and white or pale pink

NON-VIABLE (ABNORMAL OR NO STAINING)

- any essential part of embryo unstained
- nutritive tissue discolored, not firm



*cutting artifact, not a break

Fig 4 Seed stain evaluation
 Photos and illustrations: Annette Miller, USDA/ARS NLGRP