**Croton linearis**
(Pineland croton, Grannybush)

**SEED COLLECTING**
- **When to collect** – Flowering and fruiting occur year-round. Heaviest harvest occurs in Spring. Fruit are greenish-brown, oval-shaped, 3-part capsules 0.5 cm in length (Figures 1, 2, & 4).
- **How to collect** – Bag developing capsules on female plants using organza bags. Check weekly and harvest when the capsules naturally dehisce (Figure 3).
- **How to clean seed** – Use seed blower to separate seed from chaff. Some seeds may look intact but are in fact hollow and unviable. These can be separated using the seed blower or by pushing on the seeds with your fingertip and discarding seeds that collapse.

**PROPAGATION BY SEED**
- **Pretreatment** – Experiments in the seed lab have shown that soaking seeds in smoke solution (diluted 1:2) for 24h improves germination, but even without pre-treatment germination is reasonably high if seed quality is good.
- **Sowing methods (when/how/where)** – Seeds may be sown year-round. After pretreatment, sow in pure potting soil, pure limestone, or a mixture of both in clay pots and lightly cover. Seeds may be sown in a community pot.
- **Expected time to germinate** – 1-2 weeks, maximum germination usually within 3 weeks (Figure 4).
- **Expected germination rate (%)** – with pretreatment ~80%, without ~60%
- **Path to finished product** – Once seeds have 1-2 true leaves, transplant to small tubes. Incorporate 2/3 teaspoon Florikan CRF 18-6-8 time release fertilizer at time of planting. If desired, advance to gallons once secondary thickening occurs and plants are ~30 cm. Apply 1 tablespoon Florikan CRF 18-6-8 time release fertilizer at time of planting. Plants finish quicker during the growing season. Rooted individuals may be cut back during the growing process for a fuller plant. Finish product is in small tubes, 30 cm height, secondary thickening present, reproductive, and plants will stand without support. Finish product in 1 gallon is ~30 cm x 30 cm and reproductive.
- **Time to finished product** - 
- **Expected quantity at end (% of seeds sown)** –

**PROPAGATION BY CUTTINGS**
- **Is species capable of propagation by cuttings?** - Yes. Propagation by cuttings not recommended below 21 C.
- **Best type of material to collect** – Propagate using semi-hardwood cuttings collected during the growing season.
- **Best methods** – 0.3% IBA, rooting occurs in 4-6 weeks above 21 C
- **Expected success rate using best method** – +85%
- **Time to finish** -
COMMENTS

Preferred propagation method is by seed. Seedlings left in a community pot may languish under intense heat. Community pots should not be too wet otherwise seedlings are susceptible to damping off fungus.

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Figure 1. *Croton linearis* capsules at Martinez Preserve. Photo: J. Possley

Figure 2. *Croton linearis* capsules at Martinez Preserve. The outer layer often (but not always) begins to peel away from capsules when they are ripe. Photo: J. Possley
Figure 3. *Croton linearis* plant at Fairchild nursery with maturing capsules inside organza drawstring bags, and some of the seeds that have been harvested. Photo: B. Harding.
Figure 4. Close-up of *Croton linearis* seed. The fatty aril at one end is thought to aid in ant dispersal. Photo: J. Hahn.

Figure 5. Cotyledons of newly germinated *Croton linearis* seed at Fairchild’s nursery. Photo: J. Possley