

Pollinating *Alocasia*

The practical one-pager
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Everything you need to make a cross, with the botany left out. **Alocasia are protogynous** — every inflorescence is female first and male about two days later, so a cross needs pollen in hand before it needs a mother. The one thing that decides success is not technique — it is **how closely related your two plants are**.

THE CLOCK

Day 0 · a.m.	Stigmas turn receptive and visibly wet . The spathe begins to unwrap. Your window opens here — and stays open at least three days.
Morning 1	Peak scent, around first light. In big species the spadix is warm to the touch. Stigmas still receptive.
Night 1	The spathe's waist tightens shut . Access to the stigmas ends. This is the real deadline.
Morning 2	Pollen sheds , roughly 04:40–06:00. ^{2,3} Rain delays it; sometimes it does not shed at all. Collect now — this happens once.

WHAT YOU NEED

- Clean, **completely dry** soft brush
- Sharp craft knife or fine scissors
- Rubbing alcohol, to sterilise
- Aluminium foil (pollen tray)
- Small paper envelope
- Airtight container + silica gel
- Fine-mesh organza bag
- Loop-lock plant label
- Gloves, for handling seed

THE METHOD

- Find a donor that is a different plant** — and check aroidpedia.com/alocasia for the hybrid dashboard, 153 recorded crosses telling you what has already worked. Selfing *does* happen — usually between two inflorescences on one plant, or with a nearby offset — but it takes far less readily, and a self rarely gives you anything new to look at. For a hybrid you want a genuinely unrelated plant, not another division of the same one.
- Collect pollen at first light** on the shedding morning. Let the outward-bending spathe catch it, or slit a square of foil and slide it round the spadix under the male zone. Lift it with a dry brush — *Alocasia* pollen is dry. Expect **~6%** of grains to be duds whatever you do: they are visibly smaller and colourless. ⁷
- Store it dry or use it now.** Paper envelope → airtight container with silica gel → freezer — paper first, because glass and plastic hold damp against the pollen. Label with plant and date. Thaw it **still sealed**, or condensation ruins it. For a shy species that sheds almost nothing, use a cheap brush and **store the brush in the envelope**; what stayed in the bristles is still there later.
- Check your mother plant every morning.** The spathe often opens overnight. A gap wide enough for a small fly is enough to act on.
- Read the fluid, not the calendar.** Clear, shiny and sticky = receptive. Milky, dull or watery = that flower is finished, however wet it looks. This is the single most reliable signal you have, and it explains why growers say “the first day” while the measured window is **3 days** ¹ — the fluid degrades rather than switching off.
- Cut access, but keep the lower spathe.** Under glass or outdoors cut a small **keyhole** and leave the rest — it shelters the berries for months, and it is worth wiping the spathe with rubbing alcohol first. Indoors, with no rain or insects to keep out, take the whole outer spathe off and work in the open.
- Dab, load, apply.** Touch the dry brush to the wet stigmas, dip in the pollen, then dab onto **as many stigmas as you can reach**. Add no water.
- Come back tomorrow and the day after.** Pollinating again on two or three successive mornings is the biggest lever you have — it turned 0-of-40 into 17-of-46 on difficult crosses. ¹
- Bag it and label it.** Fine-mesh organza secured at the base keeps stray pollen out. Label the date and both parents, seed parent first.

SOURCES ¹ Quero Garcia, J., Ivancic, A. & Lebot, V. (2008) *NZ J. Bot.* 46: 189–203 · ² Ivancic, A. *et al.* (2005) *Can. J. Bot.* 83: 647–655 · ³ Takenaka Takano, K. *et al.* (2012) *Plant Biology* 14: 555–564 · ⁴ Boyce, P. C. (2007) *Aroideana* 30: 145–161 · ⁵ Shaw, D. E. (2001) *Aroideana* 24: 66–68 · ⁶ Shaw, D. E. (2005) *Aroideana* 28: 91–100 · ⁷ Shaw, D. E. (2003) *Aroideana* 26: 96–105. All figures are from wild *A. macrorrhizos* and *A. odora* unless stated — treat them as the best available guide to your species, not a measurement of it.

What to expect

What to expect after the cross — and the four things hardest to describe in words: **how open is open enough**, **what a receptive stigma looks like**, **where to cut**, and **how to catch pollen that falls once**.

THEN WHAT HAPPENS

1-2 DAYS	A fertilised pistil often develops a dark spot . Encouraging — not proof of seed. <i>Grower observation; unpublished.</i>
~3 WEEKS	The early read. Berries that swell then stop around week three mean incompatible pollen. ¹ Still growing at week four is a good sign.
2-5 MONTHS	Ripening. ^{1,3} Pale, then green and yellow, then warm. Do not panic past five — growers report six. And ripe is not always red : of 34 species, 24 finish orange, 7 red, and 3 pale cream or white.
HARVEST	Only at full ripe colour, or once ripe berries drop on their own.
SEED	Gloves on — the sap carries raphides , needle-shaped crystals suspended in latex. Leave seed in the berry until you are ready to sow : viability falls fast once cleaned. Then squeeze out, rinse off every trace of pulp, and sow barely covered — aroid seed needs light. Never let it dry.
GERMINATION	2-3 weeks at 21-29 °C , medium shade. ⁴ Move seedlings at the second leaf, and never bury the stem base . No copper fungicides — fatal to aroids.

A swelling berry is not proof. Unfertilised florets beside real berries swell and colour up while staying **seedless** — 6-34% of florets, once outnumbering true fruit two to one. ⁵ They ring the berries rather than scattering. **Cut one open**. Real confirmation is seedlings showing hybrid characters. (*Australian "A. macrorrhiza" in the literature is A. brisbanensis.*)

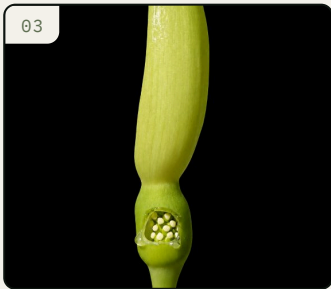
WHAT IT LOOKS LIKE



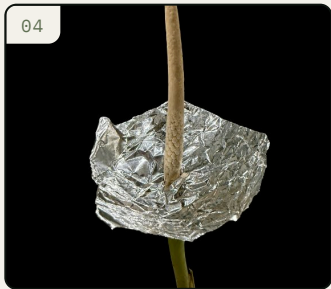
The spathe opens
Often overnight. A gap wide enough for a small fly is enough to act on.



Wet, and still matte
Glistening fluid is the go signal. The stigma itself: **rough and opaque** is ready, glossy is late. ⁶



Cut a window
A small opening into the floral chamber reaches the stigmas. Keep the rest of the spathe.



Catch the pollen
Slit a square of foil and slide it round the spadix, under the male zone, on shedding morning.

THE THREE NUMBERS

0 / 40	Single selfs and same-clone crosses that set mature seed. ¹ Repeating a self on 2-3 mornings lifted it to 17 of 46 — possible, then, just unlikely, and rarely worth the wait.
79 / 88	Crosses between genuinely unrelated plants that took. ¹
3+ days	Stigmas test receptive from 3 days before the spathe opens to 3 days after it shuts. ⁶ What closes is access , not receptivity — which is why cutting a window works.