



Frosty Fern

Selaginella martensii

The white frosted tips are made by cold, not by breeding. Give it humidity and never once let it dry out — that is the whole job.

Humidity

Grow it under a cloche or in a terrarium

LOW LIGHT

COOL ROOM

LOVES HUMIDITY

THIRSTY

A note on the name. Not a fern at all — Selaginella is a spikemoss, a lycophyte more closely related to clubmosses. It is not a moss either. Your page says *S. kraussiana* 'Variegatus', which is the trade name, but true *kraussiana* is a flat creeping mat rarely over 5 cm; the upright white-tipped Christmas plant matches *S. martensii*.

DAY TO DAY

Light	Bright indirect, or medium to low. Never direct sun — an east window, or a couple of feet back from a brighter one. Direct sunbeams scorch the tips.
Water	Keep the soil evenly damp at all times, like a wrung-out sponge. This is the one plant you must not let dry out — if the pot goes dry even once the foliage browns and usually does not recover. Check every 2–3 days.
Food	A very light feeder. Balanced houseplant food at half strength, once a month, spring and summer only. Never feed a plant that is struggling or bone dry.
Temperature	Happiest cool: 15–21°C / 60–70°F. Keep it away from heat vents, radiators and fireplaces, which dry the air around it fastest.
Humidity	High — around 70%. This is the make-or-break factor. A heated Canadian house in December sits near 20–30%, which is why so many of these fail. Grow it in a terrarium, under a cloche, in a covered glass jar, or on a pebble-and-water tray. Misting alone does not work.

WHEN THE FLOWERS FINISH

Never flowers — treat it as a terrarium plant rather than an open shelf plant and it lives for years. Trim browned stems at the base. It spreads by creeping stems that root as they go, so you can pull off a rooted piece, press it onto damp soil in a covered container and start a new plant. Repot in spring every year or two.

IF SOMETHING LOOKS WRONG

Tips and stems brown, dry and crispy, worst on the room side	Dry indoor air, not underwatering. Increase humidity with a cover or terrarium — misting is not enough.
Collapses and browns all at once a few days after you forgot it	The rootball dried out. It has a weak shallow root system and almost no drought reserve, and the damage is usually permanent.
Stems soft, black and mushy at the base with a musty smell	Too wet with no air movement. Keep it damp but never standing in water; vent a closed terrarium daily.

GROWER REFERENCE

Production and finishing figures. If you are keeping this plant on a windowsill, everything you need is on page one — this page is for the trade.

Media pH	5.5 target. No university-published optimum range exists for this crop.
Media EC	1.2–1.4. Extraction method is not stated in the source — treat as an SME equivalent and confirm against your own pour-through baseline.
Substrate	Peat-based, well-drained but strongly moisture-retentive propagation-grade mix. The crop has a weak root system supplemented by aerial roots along the creeping stems, so a stable, fine-textured, never-dry medium matters more than aggressive drainage.
Fertilizer	Not established in any Selaginella-specific guide — absent from the UF/IFAS foliage tables. General foliage practice applies: a 3-1-2 ratio complete fertilizer such as 9-3-6 or 18-6-12 with minors, run at the low end (~100–150 ppm N constant liquid feed) given the 1.2–1.4 EC target. Verify against your own tissue and pour-through testing.
Light	Low light with shade during early production, increased to all available light during the cool finish. Foot-candle and DLI values are not published for this species. Timing for a Christmas finish: pot 6 in. weeks 30–32 and 4–4.5 in. weeks 32–34, hold spacing to ~week 40–42, finish October to December.
Temperature	Establishment 20–25°C / 68–77°F. Finish dropped to 10°C / 50°F or below to harden the crop and bring out the white frosted variegation on new growth. Day/night split not separately published.
Relative humidity	High; ~70% is the figure cited for keeping it alive. Spacing is managed deliberately to hold a humid microclimate around the canopy.
Irrigation	Hold moisture level 3 or higher on a 1–5 scale and never allow dry-down — plant damage occurs if allowed to dry. Sub-irrigation or drip preferred to keep foliage dry and avoid Botrytis in the cool finish.

DISORDERS & PESTS

Irreversible desiccation damage from a single dry-down. Botrytis and basal rot under cool wet finishing with poor air movement. Weak shallow roots giving poor anchorage and slow establishment. Loss of white variegation if the cool finish is skipped. Edge burn from excess light or salts.

GROWN BY

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Three generations of family growing since 1962.

Neither a fern nor a moss but a spikemoss — a survivor of the ancient lycophyte lineage related to the giant clubmosses of the coal forests. It spreads so aggressively outdoors that New Zealand has banned its sale under the National Pest Plant Accord.

Sources

- Plantpeddler, Frosty Fern cultural guide
- Laidback Gardener; UF/IFAS foliage research reports