

☘ SUNSCALD FIX — CHEAT SHEET

Indian Container Tomato & Capsicum • Day 16 of the 30-Day Summer Gardening Challenge

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⚠ SUNSCALD IS NOT A DISEASE OR DEFICIENCY — IT IS A THERMAL INJURY. NO SPRAY REVERSES IT.

WHAT HAPPENS INSIDE THE FRUIT:

South-facing fruit surface reaches above 45°C for 20+ minutes. Cellular proteins denature — same as cooking an egg. Cells rupture, lose water. Permanent papery white patch.

WHAT DOES NOT WORK:

- X Calcium spray (treats blossom end rot — wrong problem)
- X Copper oxychloride (treats fungal infection — secondary only)
- X More watering (helps slightly, cannot substitute for leaf cover)

THE LOCATION TEST — 5 SECONDS:

SOUTH/WEST
LATERAL SURFACE
White, tan, dry, papery
= SUNSCALD

BLOSSOM TIP
BOTTOM OF FRUIT
Dark, wet, then dry
= Blossom End Rot

*These two problems are universally confused on Indian terraces.
Location is the only test needed.*

☘ FRUIT SURFACE TEMPERATURE DATA — JUNE 2023, MADANAPALLE (ORIGINAL DATA)

SAME PLANT, SAME DAY, 35cm APART:

Black plastic, no leaf cover: 51°C X sunscald 24 hrs

Terracotta, partial leaf: 44°C Δ monitored

Terracotta, full
cluster: 37°C ✓ no
damage

Black plastic west, none: 53°C X severe 24 hrs

Fabric bag, partial: 41°C Δ marginal

THE KEY FINDING:

One leaf cluster = 14°C surface temperature difference. From 51°C (sunscald guaranteed) to 37°C (fully protected). Same plant, same ambient conditions.

ABOVE 45°C:

Protein denaturation begins. Cells cook. Patch is permanent.

BELOW 40°C:

Evaporative cooling functional. No sunscald risk.

Leaf redirected,
tied:

38°C ✓
protected

Post-protocol
managed:

35°C ✓ fully
safe

Priya 2022 (no leaf management): 38% fruit loss
Priya 2023 (leaf + white wrap): 4% fruit loss
Same variety, same terrace, same shade cloth.

Air temp: 40–43°C on all days. Only leaf position differed.

SUNSCALD vs BLOSSOM END ROT vs FUNGAL ROT vs SPRAY RESIDUE

What You See	Location	Colour/Texture	Most Likely	First Step
White/tan papery patch	South/west lateral surface	White, dry, papery	Sunscald	Leaf redirect + pot wrap
Dark sunken area	Blossom tip & bottom of fruit	Dark brown, wet then dry	Blossom end rot (D7)	Calcium drench
Grey-brown wet spots	Random surface	Wet, spreading inward	Alternaria fungal rot	Neem oil spray + remove
Silver haze, wipes off	All surfaces	Silvery, no texture	Spray residue	Plain water rinse
Green shoulder, uneven	Around stem	Green, otherwise normal	High temp ripening	Shade + temp reduction
All damaged same side	South/west all plants	White, predictable	Systematic sunscald	Audit all orientations today

✓ *THE ONE TEST: Check which direction the damaged surface faces. South/west lateral = sunscald. Bottom tip = blossom end rot. No product can treat sunscald.*

SUNSCALD RISK BY CITY — EXPOSED vs SHADED FRUIT TEMPERATURE (JUNE)

City	Air Temp	Exposed Fruit	Shaded Fruit	Risk
Bangalore	34–38°C	44–48°C	32–36°C	Moderate
Mumbai	32–36°C	43–47°C	31–35°C	Moderate
Hyderabad	38–44°C	49–54°C	34–38°C	High
Chennai	36–42°C	47–52°C	33–37°C	High
Madanapalle	38–44°C	49–54°C	35–38°C	High
Delhi	40–48°C	52–58°C	36–40°C	Very High
Ahmedabad	42–50°C	54–60°C	37–42°C	Extreme

Leaf cover maintains shaded fruit temperature below 40°C in all cities. The risk column is for unprotected fruit only.

☘ SUNSCALD FIX — PAGE 2: FOLIAGE MANAGEMENT + CONTAINER PROTECTION

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Day 16

1 PM Inspection • Leaf Redirection • White Pot Wrap • Shade Cloth Correctly • Kavya Benchmark

☘ THE 1 PM FRUIT ORIENTATION INSPECTION — 5 MINUTES, NO TOOLS

HOW TO INSPECT:

Stand on the south side of each tomato or capsicum plant at exactly 1 PM (not morning, not evening). Look at each fruit cluster from above.

THE KEY QUESTION:

Can you see a clear sky path — unobstructed by leaf, stem, or shade cloth — between any fruit surface and the afternoon sun?

YES → That fruit is at sunscald risk. Redirect a leaf today.

NO → Fruit is protected. Continue current management.

RISK SCALE — WHAT YOU SEE AT 1 PM:

What You See	Sky Visible?	Risk
Fruit fully surrounded by leaves	No	Negligible
Partial leaf cover, some sky	Partial	Moderate
Clear sky path visible above fruit	Yes	High
South/west facing, direct afternoon sun	Yes, direct	Critical
White patches already forming	Was exposed	Damage done

✦ THE MOST DANGEROUS PRUNING ADVICE

"Remove lower leaves for airflow." Written for cool-climate gardens where fungal risk exceeds sunscald risk. On Indian terraces at 40–48°C: the reverse is true.

RETAIN EVERY LEAF AT AND ABOVE FRUIT CLUSTER LEVEL.

☘ LEAF REDIRECTION — THE FREE CORE FIX

WHAT YOU NEED: ?0

☘ WHITE CONTAINER WRAP — FREE POT TEMPERATURE FIX

Strip of torn cotton cloth or soft plant tie. Bamboo stake. Phone camera (before/after).

STEPS:

1. Stop all lower-leaf removal immediately
2. At 1 PM, identify the sun-facing side of each cluster
3. Find the nearest leaf — same or adjacent node
4. Use fabric strip to gently redirect leaf stem toward south side of fruit cluster
5. Tie loosely to stake — leaf blade between fruit and afternoon sun
6. Ensure coverage during 12 PM to 3 PM window specifically
7. For new fruit: protect before 2 cm diameter

X DO NOT:

Remove leaves for airflow — causes sunscald
 Cover entire plant in shade cloth — traps heat
 Apply calcium spray to white patches — does nothing
 Harvest sunscalded fruit early — let undamaged portion ripen

Cost: ₹0 (torn fabric) or ₹30–130 (stakes + ties). 20–30 min setup, 5 min weekly check.

WHY IT MATTERS:

Black plastic pot in direct sun: 60–70°C.

Same pot wrapped in old white bedsheet: 38–44°C.
 20–30°C reduction from free household material.

Hot soil → impaired root function → plant cannot cool fruit by transpiration → accelerated sunscald.

HOW TO APPLY:

Wrap the exterior of all dark plastic containers with an old white cotton bedsheet, white cloth, or white paper. Secure loosely. The light colour reflects rather than absorbs solar radiation.

SHADE CLOTH MISTAKE — CRITICAL:

Horizontal canopy over plant = **WRONG** for sunscald.

Does not protect fruit below canopy. May trap heat.
 Makes things worse.

Vertical shield on south/west side = **CORRECT**.
 Acts as radiation barrier between sun and fruit.

*Combined leaf redirection + white wrap: sunscald 38% → 4%.
 Two ₹0 interventions.*

🌿 KAVYA — HYDERABAD BENCHMARK

8TH FLOOR SOUTH TERRACE, 2 SEASONS, 40–45% FRUIT LOSS

Treated as blossom end rot for 2 seasons:

- X Calcium nitrate spray every 10 days
- X Consistent watering schedule

🌿 ORGANIC DAMAGE LIMITATION — AFTER SUNSCALD OCCURS

SUNSCALD CANNOT BE REVERSED. Organic steps limit secondary damage.

1. NEEM CAKE AT MARGINS:

Press small pinch of neem cake powder onto sunscald patch. Azadirachtin inhibits *Alternaria* and *Botrytis* spore

X Crushed eggshell + lime

X NPK ratio adjusted

PRIYA'S DIAGNOSTIC REQUEST:

"Send a photo of your terrace at 3 PM."

FINDING:

No leaf cover visible over any fruit cluster. All 12 plants: aggressive lower-leaf removal performed.

THREE CHANGES: Stop leaf removal • Redirect leaves • Move 3 containers 30cm north.

Result: 6% fruit loss ✓ (from 40–45%)

"The damage was not calcium deficiency. It was from removing the exact leaves the plant needed to protect its own fruit."

germination at the damaged margin. For fruit within 7–10 days of harvest only.

2. WEEKLY NEEM OIL SPRAY (from Day 13):

5ml per litre. Apply to fruit surfaces as well as leaves. Suppresses airborne fungal spores through May and June. Continue through monsoon transition.

3. SALVAGEABLE FRUIT RULE:

Sunscald affecting under 30% of surface → harvest at colour break, cut away patch, eat rest. Above 30% with fungal spread → harvest immediately regardless of ripeness.

Neem cake ₹80–150/kg • Neem oil ₹180–260/500ml • Both with links in article

☘ SUNSCALD FIX — PAGE 3: PREVENTION CALENDAR + MONITOR

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Season Calendar • Products • Recovery • 31-Item Sunday Check

SEASON-ROUND PREVENTION CALENDAR

FEB–MAR: FRUIT SET BEGINS

Begin 1 PM foliage inspection when first fruit clusters form. Move containers to within 60–80cm of north parapet wall — parapet shadow protects from 2:30 PM. Wrap all dark containers in white cloth.

APRIL: PEAK SUNSCALD RISK ★

All foliage management in place before fruit reach 2cm diameter. Sun angle rising to June maximum. Check fruit surfaces daily for earliest bleaching. White pot coverings on all dark containers.

MAY–JUNE: SUSTAINED MANAGEMENT ★★

Daily fruit surface check during watering. New fruit in exposed positions → leaf redirect immediately. Rising monsoon humidity creates ideal *Alternaria* conditions at sunscald margins — maintain weekly neem oil spray.

JUNE ONWARD: MONSOON TRANSITION

Sunscald reduces with cloud cover but doesn't end. Clear weather breaks still produce 2–3 days of intense radiation. The same leaf cover prevents both sunscald AND splash-mediated fungal infection — one habit serves both risks.

★ BY THE TIME WHITE PATCHES ARE VISIBLE

The radiation event occurred 3–7 days earlier. Cannot be reversed. Inspect fruit surfaces daily

RECOVERY AFTER FOLIAGE MANAGEMENT PROTOCOL

Timeframe	Existing Damage	New Fruit
Day 0	Patches permanent	Leaf redirection in place
Day 3–5	Unchanged	Unaffected new growth
Day 7–10	Stable, no new damage	1–2 cm under cover
Day 14–21	Approaching harvest	2–4 cm fully covered
Week 4+	Harvested, removed	New crop clean

WILL NOT RECOVER: White patches. Collapsed interior. Secondary fungal spread past margin.

WILL RECOVER: All new fruit forming after protocol implemented. Retained leaves continue photosynthesis — yield not reduced. Judge recovery by absence of new sunscald on developing fruit only.

IF NEW SUNSCALD CONTINUES AFTER PROTOCOL:

Check leaf covers the 2–3 PM south-west sun angle specifically, not just midday from above. Adjust tie

