Tube Rose

Agave amica

PLANT HEALTH DIAGNOSIS REPORT


FLOWER


LEAF


ROOT


ROOT


LEAF


LEAF

PRIMARY DIAGNOSIS

Basal rot / bulb rot of tuberose

+ Root-knot nematode infestation

SEVERE

MODERATE CONFIDENCE

Drench the root zone with a fungicide targeting bulb and basal rot within 24–48 hours and rogue badly affected clumps immediately to stop further spread after irrigation

CLINICAL REASONING

Across the images, tuberose plants show progressive drying of outer leaves, tip burn, stunting and decline, along with discoloured/rotting basal bulb tissue and poor root health. The root images also show bead-like swellings consistent with nematode damage, which likely predisposed plants to severe basal/bulb rot and accelerated spread under irrigated summer conditions.

20–50%

potential yield loss if untreated

Treatment cost: 2500–6000 (per spray/drench cycle plus rouging and nematode management)

Report ID	ARCORA-2026-KA-398083
Date	26 April 2026
Crop	Tube Rose
Plant parts	Flower, Leaf, Root, Root, Leaf, Leaf
Location	Kurgod
Growth stage	Flowering
Symptom duration	2+ weeks
Spread extent	Spreading fast
Scientific name	*Agave amica*

INTERVENTION

Treatment Protocol

Rogue and destroy heavily rotted plants and bulbs; avoid keeping infected bulbs in the field

IMMEDIATE

PRODUCT No chemical product. Remove entire clump with bulb and surrounding soil; do not compost infected material.

TIMING Immediately, during first field pass; repeat wherever fresh wilted clumps appear

Root-zone drench for basal rot / bulb rot

IMMEDIATE

PRODUCT Carbendazim + Mancozeb (Saaf) WP — 2 g/L + 200–250 L water/acre as soil drench around clumps; PHI 7 days. Rotate with Metalaxyl-M + Mancozeb (Ridomil Gold) 2 g/L after 1 application to reduce resistance risk.

TIMING Apply within 24–48 hours; repeat once after 7–10 days if new plants continue to decline

Alternative drench where water-soaked basal rot continues after irrigation

SHORT-TERM

PRODUCT Metalaxyl-M + Mancozeb (Ridomil Gold) WP — 2 g/L + 200–250 L water/acre as soil drench; PHI 7 days. Do not repeat more than 1 consecutive spray/drench before rotating to a different mode of action.

TIMING 7 days after first drench if disease remains active, especially in wetter patches

Nematode suppression in standing crop

SHORT-TERM

PRODUCT Fluensulfone 480 EC (Nimitz) — 1.5–2 ml/L equivalent in drench water as per label-directed soil application, 200–300 L water/acre; PHI 7 days. Rotate with biologicals rather than repeated chemical nematicide use.

TIMING Apply to moist soil after light irrigation, once in affected blocks; follow with irrigation to move product into root zone

Biological root-zone restoration

LONG-TERM

PRODUCT Trichoderma harzianum / T. viride (e.g. Trichoderma formulations) — 5–10 g/L for bulb dip or 2.5 kg/acre mixed with 50 kg FYM for soil application; PHI 0 days. Use after fungicide gap of 5–7 days; do not tank-mix with fungicides.

TIMING Apply after chemical drench cycle, then repeat in nursery/bulb treatment and next planting

Always follow label instructions and local regulatory guidelines. Consult a licensed agronomist before applying on certified organic or export crops.

FIELD ANALYSIS

Key Observations

- Image 3 shows basal bulb tissue with brown to dark rotted areas and reduced healthy roots, supporting bulb/basal rot.
- Image 4 shows multiple bead-like swellings on roots consistent with root-knot nematode galling, along with weak root system.
- Image 5 shows a severely stunted plant with drying and necrosis of older leaves from the base upward, typical of root/basal infection.
- Image 6 shows widespread leaf tip necrosis, drying outer leaves and reduced vigour in clumps, indicating systemic stress from root-zone disease.
- Image 1 and Image 2 show flowering spikes present but plants appear weak and uneven, consistent with chronic root and bulb damage affecting flowering performance.

MONITORING

Watch For

MONITOR IN THE NEXT 7–10 DAYS

- New plants showing fresh basal yellowing or sudden outer-leaf drying after irrigation
- Softening or browning at the bulb base when lightly scraped
- Increase or reduction in new root growth 7–10 days after drench
- Whether flowering spikes remain undersized or abort in newly affected clumps

FOLLOW-UP

7–10 DAY REVIEW PLAN

Reinspect the field in 7–10 days, especially low-lying or recently irrigated patches. Uproot 3–5 symptomatic plants and check whether new white roots are forming and whether basal bulb browning has stopped; treatment is working if no new wilt patches appear and inner leaves remain green, but failing if fresh clumps collapse, bulb base continues to darken, or root galling and rot increase.

DIFFERENTIAL DIAGNOSIS

Conditions Considered & Ruled Out

Drought or irrigation stress

Ruled out: Leaf drying alone could fit moisture stress, but Images 3 and 4 show diseased bulb/root condition and root swellings, indicating a biotic root-zone problem rather than purely physiological stress.

Thrips damage on flowers

Ruled out: Flowers do not show the typical bronzing, streaking or petal scarring expected with thrips as the main problem; the dominant symptoms are root decline and basal tissue damage.

Bacterial soft rot

Ruled out: There is no obvious water-soaked mushy collapse or bacterial ooze visible; the pattern is more consistent with chronic basal rot associated with soil-borne fungi and nematode predisposition.

AGRONOMIC GUIDANCE

Prevention Measures

- Improve drainage and avoid prolonged wetting around bulb zone; tuberose is highly prone to basal rot under frequent irrigation and poorly drained beds.
- Use only healthy, firm, disease-free bulbs; discard bulbs with basal discoloration, softness or poor root initials.
- Treat planting bulbs before planting with carbendazim 1 g/L or captan/thiram-based bulb treatment as locally available, followed by shade drying.
- Adopt crop rotation with non-host crops for at least 1 season in badly affected beds to reduce Fusarium and nematode carryover.

CROP CALENDAR

Seasonal Action Plan

PERIOD / SEASON	RECOMMENDED ACTION
Before planting bulbs	Select healthy bulbs, treat bulbs with fungicide/Trichoderma, and prepare raised well-drained beds
30–45 days after planting	Inspect for stunting and early leaf drying; remove suspect plants and apply preventive bio-control in root zone
Flower initiation to flowering	Reduce excess irrigation, monitor for rapid wilt patches, and drench only affected zones at first sign of basal rot
Pre-monsoon to monsoon onset	Strengthen drainage channels, avoid water stagnation, and intensify scouting every 5–7 days

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