

# Pacific Pests, Pathogens and Weeds - Online edition

## Tomato - residual herbicide (379)

### Summary

- Unknown distribution. In Oceania, symptoms of toxicity recorded in Fiji (possibly), Papua New Guinea, Vanuatu. On tomato. Residual herbicide a possible cause.
- Damage: twisting of leaves, bunching of terminate growth, stunting of plants.
- Reasons for residual herbicide and toxicity include: (i) soils (sandy, low clay) that fail to bind, e.g., glyphosate; (ii) frequent applications; (iii) applications at high concentrations; (iv) applications of phosphorus fertilizer (competing with glyphosate for soil binding sites); (v) addition of other herbicides to increase residual activity.
- Control:
  - Avoid land where glyphosate applied frequently and/or at high rates, or wait at least 40 days between last application before re-planting
  - Make sure sprays only contains glyphosate, i.e., no other chemical present to increase possible residual activity in soil.
  - READ THE LABEL CAREFULLY.
  - Alternatively, carry out a bioassay (see below): transplant test seedlings (tomato) across area prior to planting entire crop. Inspect for toxicity after 7-14 days.



Photo 1. Stunted tomato plant grown in land previously treated with glyphosate, Mount Hagen, Papua New Guinea.



Photo 2. Stunted, twisted plant with cup-shaped leaves, Port Vila, Vanuatu.



Photo 3. Plant showing twisted terminal growth and small, bunched leaves, Port Vila, Vanuatu.

### Common Name

Tomato - residual herbicide effects.

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Information from How much glyphosate? (2016) The Land. (<https://www.theland.com.au/story/3792459/residual-roundup-not-what-you-think/>); and Cornish PS (1992) Glyphosate residues in a sandy soil affect tomato transplants. *Australian Journal of Experimental Agriculture* 32: 395-9. (<https://www.publish.csiro.au/AN/EA9920395>); and from Herbicide residues in soils - are they an issue? Northern. GRDC. Grains Research Development Corporation, Australian Government. (<https://grdc.com.au/resources-and-publications/grdc-update-papers/tab-content/grdc-update-papers/2016/02/herbicide-residues-in-soils-are-they-an-issue-northern>).

Produced with support from the Australian Centre for International Agricultural Research under project HORT/2016/185: *Responding to emerging pest and disease threats to horticulture in the Pacific islands*, implemented by the University of Queensland and the Secretariat of the Pacific Community.

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