



## Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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### Tomato - residual herbicide (379)



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.

### Summary

- Unknown distribution. In Oceania, symptoms of toxicity recorded in Fiji (possibly), Papua New Guinea, Vanuatu. On tomato. Possibility of residual herbicide.
- 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 retain 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 and planting
  - Make sure product only contains glyphosate, i.e., no other chemical present to increase residual activity in soil.
  - READ THE LABEL CAREFULLY.
  - Alternatively, carry out a bioassay (see below).
  - Transplant test seedlings across area prior to planting entire crop. Inspect for toxicity after 7-14 days.

## 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. (<http://www.publish.csiro.au/ezproxy.library.uq.edu.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>).

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