Pacific Pests, Pathogens & Weeds - Fact Sheets

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Devil's fig (444)

Relates to: Weeds

Photo 1. Thicket of devil's fig, *Solanum torvum.*

Photo 2. Single bush, devil's fig, *Solanum torvum*; note, the single stem just above ground.

Photo 3. Stem and branches, devil's fig, *Solanum torvum*, showing the thorns.

Photo 4. Thorns on the stems at the back of the photograph, devil's fig, *Solanum torvum.* Note, the shape of the leaves: near oval and with short leaf stalk.

Photo 5. Flowers, devil's fig, *Solanum torvum.*

Photo 6. Flowers, devil's fig, *Solanum torvum.*

Photo 7. Flowers, devil's fig, *Solanum torvum.*

Photo 8. Fruits, devil's fig, *Solanum torvum.*

Photo 9. Flowers and fruits, devil's fig, *Solanum torvum.*

Common Name

Devil's fig; it is also known as prickly Solanum, or wild tomato. CABI prefers the name turkey berry.

Scientific Name

Solanum torvum. It was known previously as *Solanum largiflorum.* It is a member of the Solanaceae.

Distribution

Widespread. Africa, Asia, North (Hawaii), South and Central America, the Caribbean, Europe (restricted), Oceania. It is recorded from Australia, American Samoa, Fiji, French Polynesia, Guam, Kiribati, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu, and Wallis and Futuna.

It is native to southern Mexico, Central and South America, and the Caribbean.

Invasiveness & Habitat

Devil's fig is a important invasive perennial weed forming dense thickets (Photo 1). It is a weed of forest margins, waterways, plantation crops, roadsides, pastures, disturbed sites and waste areas throughout the tropics and subtropics. However, it grows best in warm, moist, fertile soils, but once established it can withstand drought by shedding its leaves. In Papua New Guinea, it grows from sea level to about 2000 masl.

Description

An upright shrub or small tree, usually 1-4 m tall, with a single stem at ground level, branching above (Photo 2). The youngest stems are green or purplish, soft-wooded, and densely covered in small star-shaped hairs. They have scattered, broad-based hooked prickles, 3-7 mm long (Photos 3&4). Older stems are brown or greenish-brown without hairs. Leaves vary in shape and are relatively large, 7-5-25 cm long, and 4-15 cm wide: young leaves are deeply lobed; older leaves are roughly oval with shallow scalloped margins and pointed tips (Photos 4&8). The leaves have prickles along the main veins. The flowers are star-shaped with five white petals fused together at the base (Photos 5-7). They are about 25 mm across, arranged in branched clusters of 15-100 flowers at the end of stems. The fruits are berries, 10-15 mm across; they are at first green and become yellow to yellowish-green as they mature (Photos 8&9). They contain a few to many flat, woody, often reddish seeds, 1.5-2 mm long.

Spread

Spread is by seeds taken by birds and bats that feed on the berries, but also in water, soil and trash. Long distance spread occurs as contaminants associated with the domestic and international trade in plants. Deliberate introductions are made to use the partial resistance of devil's fig root stocks to root-knot nematode and bacterial wilt diseases of tomatoes and eggplants.

Impact

Devil's fig forms dense thickets capable of overrunning farmlands and pastures, and of displacing native vegetation, but does not survive under a closed forest canopy. The spines on the stem and small prickles on the leaves, prevent the movement of people, livestock and wildlife.

The dense thickets are potential breeding places for rats and wild pigs and can harbour pests and diseases that can be transmitted to tomato, eggplant, tobacco and potato.

Uses

It is sometimes cultivated for its edible fruits, and is used in Thai, Loa, Indian and Jamaican cuisine, in soups sauces, pastes and curries. Used as an ornamental and as a root stock to avoid wilt diseases. The weed has a large number of medicinal uses, both for external and internal conditions.

Management

BIOSECURITY
There is a high risk of introduction. Countries not yet infested by devil's fig should consider all likely pathways for entry, and apply quarantine measures accordingly. Special consideration should be given to importations of seed requested to use devil's fig as an ornamental, a food, a medicine, or as a root stock. Seed is available on the internet. Once imported, it may be become weedy, and difficult to eradicate.

It is considered one of the 10 worst weeds in Samoa, Solomon Islands and Vanuatu.

BIOLOGICAL CONTROL
Waterhouse & Norris report that *Lepinotarsa undecimlineata*, a chrysomelid beetle is common in the Caribbean, and is said to feed only on *Solanum torvum*. Tests are required to confirm this.

CULTURAL CONTROL

- Physical & Mechanical
    - Dig out the plants; wear gloves because of the prickles and thorns! Note, the crown and root stalk of older plants much be removed, otherwise they will produce new shoots. Later, check for regrowth.
    - Plough land and later check for regrowth.

CHEMICAL CONTROL

- Cut back thickets of mature plants, and spray regrowth. In Australia, picloram + 2,4-D is registered. In Fiji, glyphosate. The following herbicidies are registered (or permitted) on the related giant devil's fig, *Solanum chrysotrichum*: glyphosate with metsulphuron-methyl; picloram + triclopyr + aminopyralid; or triclopyr + picloram with metsulfuron-methyl; picloram + aminopyralid.
- Use 2,4-D in diesoline (petrol with addition of 15% diesel) to treat stumps cut 10-15 cm above ground level. A recommendation from Papua New Guinea.

Note, in the EU, approval to use glyphosate ends in December 2022.

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval. R**ecommendations will vary with the crop and system of cultivation. Expert advice on the most appropriate herbicides to use should always be sought from local agricultural authorities.**

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Adapted from Devil's fig *(Solanum torvum)* (2018) Weeds of SE Qld and Northern NSW. Lucidcentral. (**https://www.lucidcentral.org/editors-pick-animal-and-plant-identification-keys/key-to-weeds-of-se-qld-and-northern-nsw**); and additional information from CABI (2019) Solanum torvum (turkey berry). Invasive Species Compendium (https://www.cabi.org/isc/datasheet/50559); and from Waterhouse & DF, Norris KR (1987) *Biological*

Control Pacific Prospects. Inkata Press, Melbourne. Photos 2,4,6&8 Forest and Kim Starr, Starr Environmental, Bugwood.org.

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