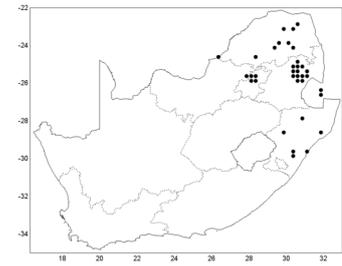




Red sunflower

Tithonia rotundifolia



RED SUNFLOWER, *Tithonia rotundifolia* (Mills) S.F. Blake (Asteraceae: Heliantheae), native to Mexico, is a large, erect and robust annual plant that grows up to 3 m in height. Its leaves are often paired and sometimes deeply lobed (i). Red sunflower produces reddish-orange, daisy-like flowerheads (ii) from late summer to autumn. Seeds are abundant, giving rise to numerous seedlings that germinate early, grow vigorously and survive even under less favourable conditions.



THE PROBLEM

Red sunflower is invasive in the humid and the sub humid tropics of Central and South America, South East Asia and tropical and subtropical countries in Africa, including South Africa. It was introduced to South Africa during the early 1900s as an ornamental plant. Its abundance in South Africa has been escalating over the past 12 years in conservation, agricultural, urban and rural areas, particularly near waterways (iii), disturbed sunny areas (ii), along railways and roadsides (iv). The current distribution of *T. rotundifolia* in South Africa covers the inland provinces Gauteng, North West, Mpumalanga and Limpopo provinces. Hence it has been listed as category 1 weed in terms of CARA and should be controlled at all costs. The weed has a negative impact on native biodiversity as well as on agricultural production. No herbicides are registered for control of this weed in South Africa while mechanical control is ineffective due to rapid recruitment of seedlings in cleared sites.



THE SOLUTION

Biological control is regarded as an essential component of any control program against red sunflower. Research into this aspect was initiated in 2007, and two highly damaging leaf-feeding beetles, *Zygogramma signatipennis* Stål and *Zygogramma piceicollis* Stål (Chrysomelidae: Chrysomelinae), were discovered in Mexico. Both beetle species were subsequently shown to be sufficiently host-specific and damaging, and permission for their release was granted in 2014. Information on the leaf-feeding beetles is contained in a separate fact sheet.



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