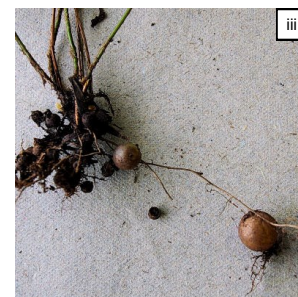


SWORD FERN (*Nephrolepis cordifolia*) is a popular ornamental plant, which is thought to be native to many tropical regions of the world, although its origin is uncertain. The bright green fronds are fairly rigid, reaching a metre long and 60 mm wide. Each frond comprises a well-defined rachis with slightly overlapping pinnate leaves (i), beneath which small, brown spores are visible. Although the fern is generally terrestrial, it may also be epiphytic, and may often be seen growing from the leaf sheaths of large, aged palm trees (ii). Sword fern is a category 1b declared invader in Limpopo, Mpumalanga, KwaZulu-Natal, Eastern Cape and Western Cape, and a category 3 invader in Gauteng, Free State, North-West, and Northern Cape. It must be controlled or eradicated where possible, and may not be sold or distributed through commercial outlets. Until fairly recently, the invasive sword fern in South Africa was mistakenly identified as *Nephrolepis exaltata*. However, this latter species lacks tubers, and may not even be present here. Sterile cultivars or hybrids are not listed under NEMBA, and have probably been derived from *N. exaltata*. Sword fern is probably more widespread than depicted on the distribution map.



THE PROBLEM

This hardy fern is a popular garden plant in South Africa, but has escaped cultivation to become naturalised in certain parts of the country where it invades swamp forest, coastal vegetation, and forest margins. Plants spread by means of spores, but also by stolons and tubers that eventually form large colonies. The tubers (iii) make it especially hard to eradicate even in suburban gardens where it eventually becomes a menace. Then, surplus plants are eventually dumped on the local refuse dump or a vacant property where they root themselves and create a new infestation. Although sword fern may not yet be widespread throughout the country, it has the potential to spread rapidly and to form dense infestations that outcompete and replace indigenous vegetation, thereby transforming natural habitats.



THE SOLUTION

Registered herbicides are not available for use against sword fern, and infestations are difficult to eradicate because of the tubers. Unfortunately, since no biological control agents have been released, mechanical control remains the best option. However, this is time-consuming, and regular follow-ups are required to ensure that all tubers have been removed and that the plants will not merely regrow. Also, the tubers must be disposed of in a manner that destroys them, for example by allowing them to rot in the sun in black plastic bags because, if they are left intact, they will merely regrow. In garden situations, once the ferns have been eradicated, they can be replaced with any one of a number of indigenous ferns, depending on the local climate. *Rumohra adiantiformis*, leather leaf or Knysna fern (iv), is a good, hardy alternative that requires little maintenance. Also, the fronds are sufficiently attractive and long-lasting to use with cut flowers in a vase. Your local, indigenous nursery will advise you on this and other indigenous options that are suitable for your particular conditions.

