

Jumping the Garden Fence®

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INVASIVE ALIEN PLANTS

The presence of invasive alien plants in South Africa is due to human intervention. Many alien plants become naturalized and start to multiply and spread far from their original planting. Their invasiveness is harmful to the environment.

What Makes Some Alien Plants Invasive?

- These plants have no natural enemies.
- The rapid reproduction by means of seeds.
- Easily reproducing by vegetative means.
- Natural chemical defences.
- Hybrid vigour.

In South Africa there is not enough information available for accurate assessment of risks. Precautionary measures must be taken that sometimes clash with trade interests.

How Did the Invasive Alien Plant Get Into the Country?

- As garden ornamentals.
- As barrier plants — to prevent soil erosion, etc.
- As forestry or agro-forestry species.
- Unintentionally — people bringing in small quantities of seeds without declaring them at the border.

Main Proportion Invaders Among Different Users.

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|-----------------------|-----|
| ■ Ornamentals | 55% |
| ■ Barrier plants | 13% |
| ■ Agriculture | 11% |
| ■ Forestry | 6% |
| ■ Not cultivated | 9% |
| ■ Ground cover/binder | 6% |

Examples of Ornamental Plants That Have Been Declared Weeds or Invader Plants.

Ballon vine, *Cardiospermum grandiflorum*

Pompon weed, *Campuloclinium macrocephalum*

Yellow bells, *Tecoma stans*

Red sunflower, *Tithonia rotundifolia*

Queen of the night, *Cereus jamacaru*

Rose cactus, *Cylindropuntia fulgida*

Yellow oleander, *Thevetia peruviana*

Mother of million, *Kalanchoe* (syn. *Bryophyllum*) *delagoense*

Indian shot, *Canna indica*

Fountain grass, *Pennisetum setaceum*

Water hyacinth, *Eichhornia crassipes*

Parrot's feather, *Myriophyllum aquaticum*

Black locust, *Robinia pseudoacasia*
 Jacaranda, *Jacaranda mimosifolia*
 Syringa, *Melia azedarach*
 Tipu tree, *Tipuana tipu*
 Orchid tree, *Bauhinia variegata*
 Pearl acacia, *Acacia podalyriifolia*
 Singapore daisy, *Thelechitonia trilobata*
 Sword fern, *Nephrolepis exaltata*

Risks Associated With Alien Plants.

Water pollution and obstruction of watercourses: *Acacia longifolia*, *Sesbania punicea*

Blocking of natural sunlight: *Melia azedarach*

Biodiversity: *Campuloclinium macrocephalum*

Soil pollution: *Acacia podalyriifolia*

Tourism/landscapes: *Jacaranda mimosifolia*, *Hakea sericea*, *Robinia pseudoacasia*

Agriculture: *Solanum elaeagnifolium*, *Cereus jamacaru*, *Cylindropuntia* (syn. *Opuntia*) *fulgida*, *Echinopsis spachiana*

Toxicity, injuries: *Nerium oleander*, *Thevitia peruviana*, *Opuntia aurantiaca*

Allergies: *Solanum mauritianum*, *Parthenium hysterophorus*

Forestry: *Lantana camara*, *S. mauritianum*

Pastures: *Campuloclinium macrocephalum*, *Cirsium arvense*

Allelopathy: *Eucalyptus camaldulensis*, *Acacia podalyriifolia*

Weight and smother: *Anredera cordifolia*, *Macfadyena unguis-cati*

Aquatic ecosystems: *Eichhornia crassipes*, *Azolla filiculoides*, *Pistia stratiotes*

Water utilization and boats: *Salvia modesta*, red water fern, and *E. crassipes*.

LEGISLATION ON INVASION ALIEN PLANTS IN SOUTH AFRICA

Conservation of Agricultural Resources Act (CARA)

National Environmental Management: Biodiversity Act (NEMBA) Act 10 of 2004

Unless you have a permit, you may not: acquire in any way; grow, breed, or propagate in any way; have in possession of, or physically control; convey, move, or otherwise translocate; import into the Republic of South Africa; sell, trade, give, donate, or dispose of; or carry out any other prescribed activity involving a specimen of an alien or a listed invasive species (extra-limital indigenous species = alien species).

Proposed Regulations.

- Alien species entering country are regulated.
- Provisions for unintentional introductions and pathways for invasion.
- Invasive species regulated to appropriate level, i.e., different categories.
- Alien species already in the country not regulated unless they are invasive.
- Extra-limital species only regulated where invasive.
- Notification only necessary for category 1a (see below).

CARA regulations.

- Category 1. Must control and eradicate.
- Category 2. Demarcate/permits to be issued.
- Category 3. Ban sale and further cultivation.
- Category X. Pending.

National Environmental Management: Biodiversity Act Regulations

- 1a. Strict control and eradicate.
- 1b. Management.
2. Demarcate/permits to be issued.
3. Ban sale and further cultivation.
4. Extra-limital species.
5. Pending/surveillance.
 - X. Prohibited aliens.
 - X. Exempted alien species.

Strict Control and Eradicate. Species requiring compulsory control:

- Crucial problem species.
- Effective control is practicable.
- Illegal to have a species on property, i.e., *Acacia paradoxa* (kangaroo thorn).

Management. Species requiring management:

- Effective control by individuals not possible.
- Must contain spreading.
- Integrated programme (typically managed by a local, regional, or national authority) will be required, i.e., *Caesalpinia decapetata* (Mauritius thorn).

Demarcate/Permits to Be Issued. Permitted in demarcated areas, e.g., woodlot, shelterbelt, or plantation.

- Permit required.
- Category 1b outside of demarcated area, i.e., *Acacia mearnsii* (black wattle).

Ban Sale and Further Cultivation. Regulated by activity.

- Certain activities are not permitted, e.g., sale or planting.
- Must contain spreading.
- Must notify purchaser of land.
- Can be declared 1a or 1b in certain area, i.e., *Grevillea robusta* (silver oak).

Extra-Limital Species.

- Listed extra-limital species.
- Indigenous species beyond their natural distribution ranges that are a threat to biodiversity (e.g., hybridisation).
- Permit required for possession, conveyance, etc., outside of natural range, i.e., *Protea neriifolia* cultivar.

Pending/surveillance.

- Alien or extra-limital species.
- May be listed after due investigations.
- Purchaser of species must be notified of status.
- Purchaser of land must be notified of the presence of such species, i.e., *Pyracantha coccinea* (firethorn).

Prohibited aliens.

- Species for which permits may not be issued.
- Species known to cause major problems.
- Not currently present in South Africa, i.e., *Eichhornia azurea* (anchored water hyacinth).

Current Situation

- Department of Environment and Tourism rejected proposal.
- Terminated involvement of task team.
- Public participation, i.e., Nurserymen's Associations, etc.
- The final outcome is in our hands.