



FACT FILE

A landowner's guide to

PLANNING ALIEN CONTROL

Landowners are under a legal obligation to control invading alien plants occurring on their properties. Planning this procedure is essential for the long-term success of the programme; the following gives a brief outline of the factors which need to be taken into consideration and the methods applicable.

Prioritization

- Areas with young, less dense trees, which have smaller seed banks and a potential high rate of spread, should be targeted first.
- Dense stands should ideally be left for last.
- The ability and resources available for follow up operations should determine the size and location of the initial clearing operation.

Factors influencing the extent and location of the initial clearing also include:

- Post clearing land use potential.
- Seasonal activities of farm labour (e.g. labour shortage in spring and summer)
- Threat to pasture and other crops
- Rehabilitation and restoration potential

Budget

When compiling a budget the following are essential to take into account

- **Vegetation;** the species, density, area covered and growth stage
- **Terrain;** slope and access, transport, methods and equipment
- **Labour;** skilled or unskilled, number, unit cost and availability
- **Technique;** chemical or mechanical
- **Equipment;** maintenance and cost
- **Herbicide;** type, cost, environment, climatic factors
- **Programme;** total cost, duration, number of treatments

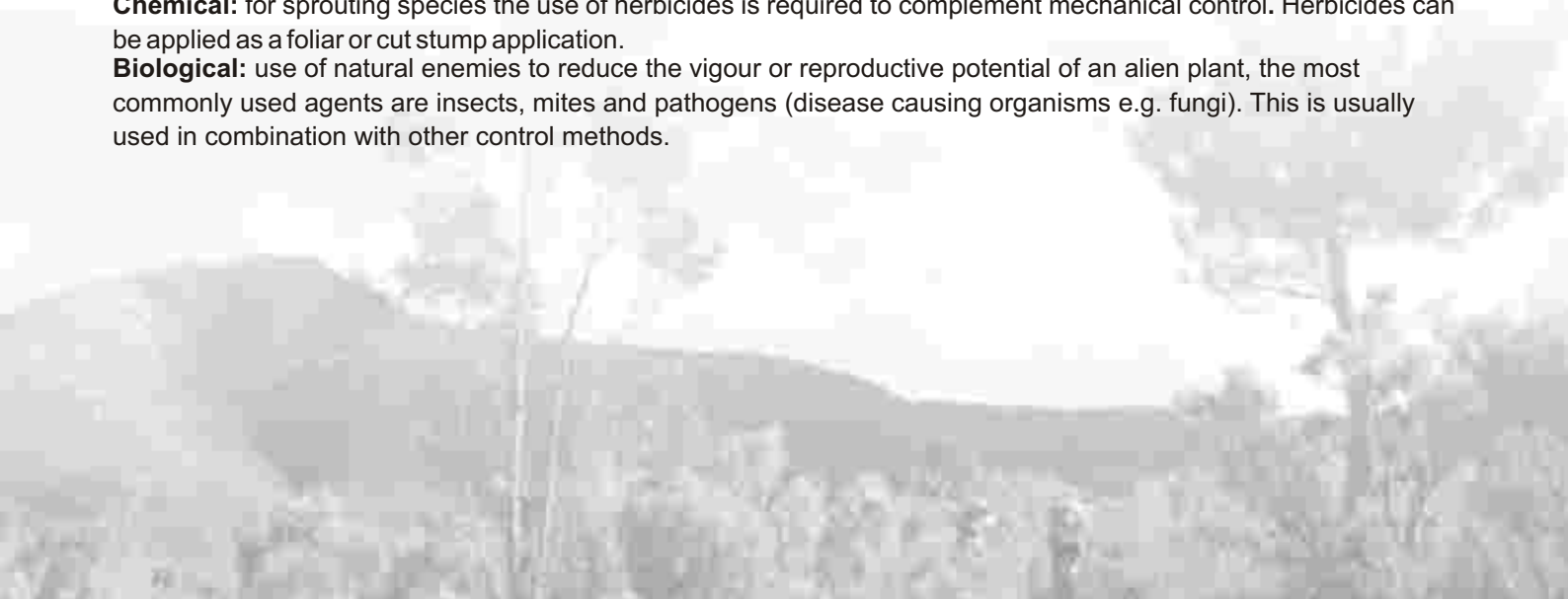
Methods

Three control options exist,

Mechanical: used for non-sprouting species, mature plants are cut down, and seedlings hand pulled or burnt.

Chemical: for sprouting species the use of herbicides is required to complement mechanical control. Herbicides can be applied as a foliar or cut stump application.

Biological: use of natural enemies to reduce the vigour or reproductive potential of an alien plant, the most commonly used agents are insects, mites and pathogens (disease causing organisms e.g. fungi). This is usually used in combination with other control methods.



Control methods for the most common species in your area

Black Wattle (*Acacia mearnsii*):

Mature medium to dense stands: Felling and burning, herbicide stump treatment, stump treatment with fungus, frilling, bark stripping or ringbarking, or using biological control "*Melanterius acaciae*" can be used to treat this category.

Scattered mature trees: All the methods of eradication described above are applicable with the exception of the release of *Melanterius acaciae*. Barkstripping and frilling are good options for this category.

Medium and dense stands of saplings: Trees can be felled and the stumps treated with herbicide or fungus, the slash can be burnt (if fungus is not being applied). A stem treatment of herbicide may be applied.

Scattered and single young trees: The cheapest and most efficient way is to apply herbicide to the stems, however stump treatment is also applicable.

Seedlings: Foliar spray, handpulling or burning are effective for this category.

Port Jackson (*Acacia saligna*):

Large trees: These can be felled and the stumps treated with herbicide. Frilling, also applying herbicide, can be used as an alternative.

Saplings and young trees: A foliar spray may be applied or alternatively handpulling and tree popping could be implemented.

Seedlings: A foliar spray may be applied, or handpulling be employed.

Pine (*Pinus pinaster*) and (*Pinus radiata*):

Mature trees: Felling is the most common means of eradication, ringbarking is also effective, removing a 12-15 cm ring of bark near the base of the stem.

Seedlings: Burning the seedlings would prove less labour intensive than cutting at the base of the stem, it is important to apply these control measures before seeds have been formed.

Silky Hakea (*Hakea sericea*):

Mature trees and thickets: Trees can be felled and left to dry for eight to ten months. The stacks can then be burnt to destroy the dead material and new seedlings. Alternatively the seedlings can be hand pulled.

Biological control: Three species of insects are available with the main impact on seed production thus it is a long-term control.



Black Wattle (*Acacia mearnsii*):



Port Jackson
(*Acacia saligna*)



Pine
(*Pinus pinaster*)



Silky Hakea (*Hakea sericea*)





'n Gids vir grondeienaars oor

DIE BEPLANNING VAN INDRINGERBEHEER

Grondeienaars word wetlik verplig om uitheemse indringerplante wat op hul eiendom voorkom te beheer. Dit is nodig om hierdie proses te beplan om langtermynsukses te verseker. Die volgende verskaf 'n bondige oorsig oor die faktore wat in ag geneem moet word by beplanning, asook die toepaslike beheermetodes wat gebruik kan word.

Prioritisering

- Gebiede met jong, yler stande boompies wat kleiner saadbanke het en moontlik teen 'n vinnige tempo kan versprei, behoort eerste geteiken te word.
- Aandag behoort ideaalgesproke eers laaste aan digte stande gegee te word.
- Die vermoë tot opvolgwerk en die hulpbronne wat daarvoor beskikbaar is behoort die omvang en ligging van die aanvanklike uitroeiwerk te bepaal.

Die volgende faktore beïnvloed onder meer die omvang en ligging van die aanvanklike uitroeiwerk:

- Die gebruikspotensiaal van die grond ná indringerverwydering
- Seisoenale werksaamhede van plaaswerkers (bv. arbeidstekorte in die lente en somer)
- Die bedreiging vir weidings- en ander gewasse
- Die rehabilitasie- en herstelpotensiaal.

Begroting

Wanneer 'n begroting opgestel word, is dit noodsaaklik om die volgende in ag te neem:

- **Plantegroei:** die spesie, digtheid, oppervlakte beslaan en groeistadium
- **Terrein:** helling en toeganklikheid, vervoer, metodes en toerusting
- **Arbeid:** geskool of ongeskool, aantal, eenheidskoste en beskikbaarheid
- **Metode:** chemies of meganies
- **Toerusting:** onderhoud en koste
- **Onkruidodder:** soort, koste, die omgewing, klimaatsfaktore
- **Program:** totale koste, duur, aantal behandelings

Metodes

Daar is drie beheeropsies:

Meganies: gebruik vir nie-spruitende spesies; volwasse plante word afgekap en saailinge word met die hand uitgetrek of verbrand.

Chemies: by spruitende spesies is die gebruik van onkruidodder nodig om meganiese beheer aan te vul. Onkruidodders kan op blare of op afgekapte stompe aangewend word.

Biologies: die gebruik van natuurlike vyande om die lewenskragtigheid en voortplantingspotensiaal van 'n uitheemse plant te verminder; die mees algemeen gebruikte agente is insekte, myte en patogene (organismes wat siektes veroorsaak, bv. swamme). Dit word gewoonlik saam met ander beheermetodes gebruik.



Beheermetodes vir die spesies wat die volopste in u gebied voorkom

Swartwattel (*Acacia mearnsii*):

Volwasse, medium tot digte stande: Afkapping en verbranding, stompbehandeling met onkruidodder, stompbehandeling met 'n swam, verwondingsbehandeling, basstroping of ringelering, of die biologiese beheeragent *Melanterius acaciae* kan gebruik word om hierdie kategorie indringer te behandel.

Verspreide volwasse bome: Benewens die vrylating van *Melanterius acaciae* is al die uitroeiemetodes wat hierbo beskryf is, ook hier van toepassing. Basafstroping en ringelering is goeie opsies vir hierdie kategorie.

Medium en digte stande jong boompies: Boompies kan afgekap word en die stompe kan met onkruidodder of 'n swam behandel word; die afgekapte hout kan verbrand word (as 'n swam nie toegedien word nie). Onkruidodder kan as stambehandeling toegedien word.

Verspreide en alleenstaande jong boompies: Die goedkoopste en doeltreffendste manier is om onkruidodder op die stamme aan te wend, maar stompbehandeling is ook geskik.

Saailinge: Blaarbespuiting, uittrek met die hand of verbranding is doeltreffend vir hierdie kategorie.

Port Jackson (*Acacia saligna*):

Groot bome: Hulle kan afgekap word en die stompe kan daarna met onkruidodder behandel word. Verwondingsbehandeling tesame met onkruidodder kan andersins gebruik word.

Baie jong en jong boompies: Blaarbespuiting kan toegedien word, of andersins kan die boompies met die hand of 'n boomuittrekker (Tree Popper) uitgetrek word.

Saailinge: Blaarbespuiting kan toegedien word, of die boompies kan met die hand uitgetrek word.

Denne (*Pinus pinaster* en *Pinus radiata*):

Volwasse bome: Die gebruiklikste manier om hierdie bome uit te roei is om hulle af te kap; ringelering, waar 'n ring van 12-15 cm bas naby die stambasis verwyder word, is ook doeltreffend.

Saailinge: Om die saailinge te verbrand is minder arbeidsintensief as om elke boompie by die stambasis af te sny; dit is belangrik om hierdie beheermaatreëls toe te pas voordat sade gevorm word.

Syerige hakea (*Hakea sericea*):

Volwasse bome en ruigtes: Bome kan afgekap en vir agt tot tien maande gelaat word om uit te droog. Die stapels kan dan verbrand word om die dooie materiaal en nuwe saailinge te vernietig. Die saailinge kan ook met die hand uitgetrek word.

Biologiese beheer: Drie insekspesies wat hoofsaaklik saadproduksie teiken, is hiervoor beskikbaar; dus is dit 'n langtermynbeheermetode.



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