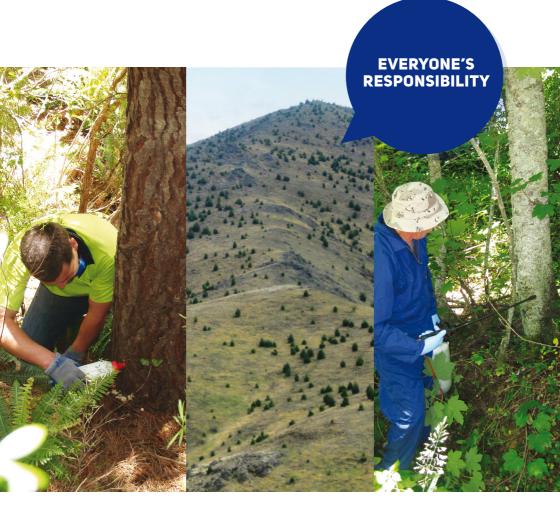
# Controlling Pest Tree Invaders







# **Pest Tree Invaders**

Included in the Tasman-Nelson Regional Pest Management Plan.

These pest trees are spreading in our region. Their seeds or vegetative materials are invading native habitats and are compromising the biodiversity of; alpine grasslands, forests, shrub lands, dunes or wetlands.

#### **DOUGLAS FIR** – Pseudotsuga menziesii

Western North America

Site-Led Pest Plant, Abel Tasman National Park



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Metsulfuron-Methyl or Picloram or Glyphosate 450 based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml of the solution 50 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram.*)

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for five times the trunk diameter. ONLY SUITABLE FOR TREES LESS THAN 150 MM DIAMETER.

# **ENGLISH HOLLY** – *Ilex aquifolium*

Europe, West Asia, NW Africa Site-Led Pest Plant, St Arnaud Village



Remove - Hand pull or dig seedlings.

Stump treat – Fell at ground level and paint stump top with a Glyphosate 450 based herbicide gel (see back page) or 20 ml Tordon® Brushkiller XT/1 litre.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or with 20 ml Tordon\* Brushkiller XT/1 litre. (*See page 6 for tree drilling diagram*.)

Basal spray – TAKES EFFECT SLOWLY. Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

### **QUEENSLAND POPLAR** – Homalanthus populifolius

Australia & New Guinea
Sustained Control Pest Plant





Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Metsulfron-Methyl or Picloram based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram.*)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 150 ml Glyphosate 360 and 10 ml penetrant / 10 litre.

Basal spray - Using X Tree Wet & Dry ® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, for a distance from the root collar up the trunk for three times the trunk diameter.

**NPPA Pest Plant** (see back page).

# **ROWAN TREE** – Sorbus aucuparia

Europe, parts of Asia and North Africa Site-Led Pest Plant, St Arnaud Village



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Glyphosate 450 based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360. (See page 6 for tree drilling diagram.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

### **SYCAMORE** – Acer psuedoplatanus

Central Europe / Southwestern Asia

Site-Led Pest Plant, Abel Tasman National Park & St Arnaud Village



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Picloram or Metsulfuron-Methyl based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 10 ml of the solution 20 gm Metsulfuron-Methyl 600 / 1 litre. (See page 6 for tree drilling diagram.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – TAKES EFFECT QUICKLY. Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire cirumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

# **TAIWAN CHERRY** – Prunus campanulata

Taiwan, Japan, S.E China and Vietnam *Eradication Pest Plant* 



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Glyphosate 240 or Glyphosate 450 based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml undiluted Glyphosate 360/1 litre. (See page 6 for tree drilling diagram.)

Foliar spray – Spray with 150 ml Glyphosate 360 and 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre.

# Other Pest Tree Invaders

#### **ALDER** – Alnus glutinosa

Eurasia, North Africa



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell tree and paint stump top with a Picloram or Metsulfuron-Methyl based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram.*)

Foliar spray – Spray ensuring full coverage with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre or 150 ml Glyphosate 360 and 20 ml penetrant/10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter. IN WETLANDS APPLY CAREFULLY WITH A PAINT BRUSH TO PREVENT WATER CONTAMINATION.

#### CHERRY LAUREL - Prunus laurocerasus

SW Asia, SE Europe



Remove - Hand pull or dig seedlings.

Stump treat – Fell at ground level and paint stump top with a Metsulfuron-Methyl based herbicide gel (see back page) or 100 ml Tordon® Brushkiller XT/1 litre.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600 / 1 litre or 10 ml undiluted Tordon® Brushkiller XT. (*See page 6 for tree drilling diagram.*)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre or 60 ml Tordon® Brushkiller XT and 10 ml penetrant/10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

#### **CHILEAN MAYTEN** – Maytenus boaria

Chile and Argentina





**Remove** – Hand pull or dig only small seedlings.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml of undiluted Tordon® Brushkiller XT.

Foliar spray – Spray seedlings and small plants or root sprouts with 60 ml Tordon® Brushkiller XT and 10 ml penetrant/ 10 litre. (See below for tree drilling diagram.)

NPPA Pest Plant (see back page).

# **JAPANESE SPINDLE TREE** – Eunonymus japonicus

Japan, China, Korea





Remove - Hand pull or dig seedlings.

Stump treat – Fell at ground level and paint stump top with a Metsulfuron-Methyl based herbicide gel (see back page) or 100 ml Triclopyr 600 EC/1 litre or 100 ml Tordon\* Brushkiller XT/1 litre.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See below for tree drilling diagram.*)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre or 60 ml Triclopyr 600 EC and 10 ml penetrant/10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

NPPA Pest Plant (see back page).



# **JAPANESE WALNUT** – Juglans ailantifolia

Japan and Sakhalin





**Remove** – Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Metsulfron-Methyl or Picloram based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram*.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 150 ml Glyphosate 360 and 10 ml penetrant/10 litre.

Basal spray – Using X Tree Wet & Dry ® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, for a distance from the root collar up the trunk for three times the trunk diameter.

NPPA Pest Plant (see back page).

## KARO – Pittosporum crassifolium

Northern New Zealand



This native tree from Northland is a prolific seeder. It has been widely planted through out New Zealand. The problem is it cross breeds with our regions endemic Pittosporums, resulting in unwanted hybrids.

Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Picloram based herbicide gel (see back page) or 20 ml Tordon® Brushkiller XT/1 litre.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram*.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

### **LOQUAT** – Eriobotrya japonica

China, Japan



**Remove** – Hand pull or dig seedlings.

Sump treat – Fell at ground level and paint stump with a Glyphosate 450 based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360. (See page 6 for tree drilling diagram.)

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

# MONKEY APPLE OR LILLY PILLY – Syzygium smithii

Australia





Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Metsulfuron-Methyl based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (See page 6 for tree drilling diagram.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter. IN WETLANDS APPLY CAREFULLY WITH A PAINT BRUSH TO PREVENT WATER CONTAMINATION.

NPPA Pest Plant (see back page).

#### **PINE WILDINGS** – Pinus species

Northern America and Eurasia







Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Metsulfuron-Methyl or Picloram or Glyphosate 450 based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with or 10 ml of the solution 50 gm Metsulfuron-Methyl 600/1 litre. **Note: For Maritime pine** – *Pinus pinaster*, **fill each hole with 10 ml undiluted Glyphosate 510.** (*See page 6 for tree drilling diagram.*)

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter. ONLY SUITABLE FOR TREES LESS THAN 150 MM DIAMETER.

CONTORTA (pinus contorta), only, is a NPPA Pest Plant (see back page).

# SILVER BIRCH - Betula pendula

Europe and parts of Asia



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Glyphosate 450 based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml undiluted Glyphosate 360. (See page 6 for tree drilling diagram.)

Foliar spray – Ensuring full leaf coverage, spray with 200 ml Glyphosate 360 and 20 ml penetrant / 10 litre.

Basal spray – ONLY SUITABLE FOR TREE TRUNKS LESS THAN 150 MM IN DIAMETER. Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

#### **STRAWBERRY DOGWOOD** – Cornus capitata

Himilayas to Western China



**Remove** – Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Glyphosate 450 based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 100 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (*See page 6 for tree drilling diagram.*)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

#### TREE PRIVET - Liqustrum lucidum

Southern China



Remove - Hand pull or dig seedlings.

**Stump treat** – Fell at ground level and paint stump top with a Glyphosate 450 or Metsulfron-Methyl based herbicide gel (*see back page*).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml of the solution 20 gm Metsulfuron-Methyl 600 / 1 litre or with 10 ml undiluted Glyphosate 360. (*See page 6 for tree drilling diagram.*)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant / 10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire circumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter.

**NPPA Pest Plant** (see back page).





#### **WATTLES** – Acacia species

Australia



Remove - Hand pull or dig seedlings.

Stump treat – Fell tree and paint stump top with a Picloram based herbicide gel (see back page) or 50 ml Triclopyr 600EC/1 litre or 50 ml Tordon\* Brushkiller XT/1 litre.

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 5 ml undiluted Triclopyr. (See page 6 for tree drilling diagram.)

Foliar spray – Spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre or 60 ml Tordon® Brushkiller XT and 10 ml penetrant/10 litre.

Basal spray – Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire cirumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter

#### **WILLOWS** – Salix species

Northern hemisphere temperate regions





**Stump treat** – Fell tree and paint stump top with a Glyphosate 450 or Picloram or Metsulfron-Methyl based herbicide gel (see back page).

**Drill and fill** – Drill downward sloping holes (80 mm deep, 20 mm diameter) around the trunk every 200 mm. Fill each hole with 10 ml undiluted Glyphosate 360 or 10 ml of the solution 20 gm Metsulfuron-Methyl 600/1 litre. (See page 6 for tree drilling diagram.)

Foliar spray – Ensuring full leaf coverage, spray with 5 gm Metsulfuron-Methyl 600 and 10 ml penetrant/10 litre or 150 ml Glyphosate 360 and 20 ml penetrant/10 litre.

Basal spray – TAKES EFFECT QUICKLY. Using X Tree Wet & Dry® Basal herbicide, thoroughly wet the entire cirumference of the lower trunk, from the root collar up the trunk for three times the trunk diameter. IN WETLANDS APPLY CAREFULLY WITH A PAINT BRUSH TO PREVENT WATER CONTAMINATION.

CRACK WILLOW (salix fragilis) and GREY WILLOW (salix cinerea) are NPPA Pest Plants (see back page).

#### Disclaimer

Information in this fact sheet regarding herbicide does not necessarily appear on the labels of the products concerned. Tasman District and Nelson City Councils do not accept any liability for any damage to any person, property or thing that may arise from use of chemicals at non-standard rates. Mention of product trade names implies neither endorsement of those products, nor criticism of similar products not mentioned.

Standing dead trees located near buildings, vehicles, roads or people may become a hazard as they rot and fall apart. In these situations, remove dead trees while their wood is firm.

## Herbicides notes – always read label instructions!

Glyphosate 360 - Brand names: Agpro Glyphosate 360, Rainbow & Brown Glyphosate, Roundup® Renew, Roundup® 360 Pro, WeedMaster G360.

Glyphosate 450 - Brand names: Agpro Glyphosate 450, Allout 450, Firstrate 450, Orion Glyphosate 450, Polaris 450.

**Glyphosate 510** – Brand names: Agpro Green Glyphosate 510, Country Mile Glyphosate 510, Deal 510 RF, Glypho Super 510.

Herbicide Gel (Glyphosate 240) -

Brand name: Cut'N'Paste Bamboo Buster

Herbicide Gel (Glyphosate 450) -

Brand name: Cut'N'Paste Glimax™ Professional.

Herbicide Gel (Metsulfuron-Methyl) -Brand name: Cut'N'Paste Met Gel.

Herbicide Gel (Picloram) - Brand name: Agpro Picloram Gel, Cut'N'Paste Picloram, Triumph Gel, Vigilant™II.

Metsulfuron-Methyl 600 - Brand names: Agpro Meturon®, Associate® 600WDG, Eradicate 600, Escort®, Mustang®, Rainbow & Brown MSF600.

Triclopyr 600 EC - Brand names: Agpro Triclop 600, Brush Off®, Eliminate, Grazon®, Rainbow & Brown Triclo Herbicide, Scrubcutter®, Vanguard, Victory™.

Tordon® Brushkiller XT - contains Picloram and Triclopyr.

X Tree Wet & Dry® Basal herbicide – contains Triclopyr and Biodiesel.

**Penetrant** – Sticking or wetting agent that assists the potency of herbicides. Brand name Pulse.

**Herbicide supplies** – Are sold locally at garden centres and farm supply businesses.

# Helpful websites

Weed Busters: www.weedbusters.ora.nz/ weed-information/weed-list

**Auckland Council Pest Plants identification:** www.aucklandcouncil.govt.nz/environment/ plants-animals/pests-weeds/pages/identifyweeds.aspx

Agpro, Agrichemicals: www.agpro.co.nz

Rainbow & Brown, Herbicides:

www.rainbowbrown.co.nz/herbicides

Cut 'N' Paste: www.cutnpaste.co.nz

#### **Explanations**

NPPA Pest Plant - National Pest

Plant Accord. The Ministry for Primary Industries have prepared a list of pest plants banned from sale or propagation, throughout New Zealand. www.biosecurity.govt.nz/nppa

**Dispersal Mechanisms** – Most pest tree seeds are dispersed by wind or birds and in a few cases by water. Trees such as willow are dispersed by branch or root fragments, so care should be taken when pruning or removing such trees.

**Timing** – Herbicides are more potent when they are applied to actively growing trees during spring and summer (Sep - Feb).

Water PH – When mixing water with herbicides use community supply or stream water. Rain water may be too acidic and will inhibit herbicide potency.

**Contact your local Biosecurity Officer:** 





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