

Wilding trees: preventing their spread

Self-sown trees can threaten land use options, scenic values and biological diversity.

Adopting wilding prevention techniques will help avoid future costly eradication programmes.

Self-sown trees usually have little value. This is because they are variably spaced and aged, often of poor form, difficult to access, and hard to harvest.

Each tree can produce vast quantities of seeds, which can blow considerable distances, and quickly become established.

Key points for forest developers and landowners to be aware of are:

- Prevention is easier than cure
- Spread is predictable

Wildings are very obvious before they reach cone bearing age



Wilding tree spread in the Mackenzie Basin

TECHNIQUES TO PREVENT TREE SPREAD

Wilding tree spread depends on three factors: species, siting, and down-wind land use.

Use the score sheet over the page to calculate the risk of spread before you plant.

Use the highest figure applying to your situation.

Choice of Species and Sites

Some species spread much more readily than others. Spread-prone plantation species such as Corsican pine and Douglas fir should never be planted:

- on or near "take-off" sites (ridges and slopes exposed to strong prevailing winds)
- immediately upwind of undeveloped areas.

Species vary in palatability, which affects how easily they are controlled by stock (See (1b) in the table over the page).

Planting design

Two or more rows of less spread-prone species, such as Ponderosa or Radiata pine, planted along plantation edges may reduce the spread of internal trees.

Grazing, oversowing and topdressing

Wilding seedlings are vulnerable to grazing for the first two years. Mob stocking with sheep will significantly limit their spread, often to the extent that other control requirements are minimal. Cattle grazing is not as effective.

Spread can be limited by oversowing and topdressing within a 200 m zone of spread-prone trees. This promotes increased grazing pressure on young wildings and helps the tussock grasslands compete strongly with germinating tree seedlings.

CALCULATE YOUR RISK OF WILDING TREE SPREAD FROM NEW PLANTINGS

1 Species:

a) Spreading vigour:

Radiata & muricata	1
Ponderosa & larch	2
Corsican & Douglas fir	3
Scots & contorta	4

Enter score

b) Palatability:

Radiata & ponderosa	1
Contorta & larch	2
Scots & Douglas fir	3
Corsican	4

Enter score

2 Siting

Flat, sheltered, or facing NE to SSW	1
Flat, partially exposed to N & W	2
Flat, fully exposed to N & W	3
Take off site (ridges and slopes exposed to strong prevailing winds)	4

Enter score

3 Downwind Land Use

(a) Within 200m:

Developed pasture/mob stocked (sheep) or closed canopy scrub/forest	1
Semi improved grazing/occasional mob stocking	2
Extensive grazing only	3
No grazing	4

Enter score

(b) Within 200 – 400 m

OR

(c) Within 200m-2km if 3 or 4 scored in "Siting"

Developed pasture/mob stocked (sheep) or closed canopy scrub/forest	1
Semi improved grazing/occasional mob stocking	2
Extensive grazing only	3
No grazing	4

Enter score

Total Score



Interpreting your score:

- A total of 12 or more = **High Risk**
- A score of 3 or 4 in "Siting" plus a score of 3 or 4 in "Downwind Land Use" = **High Risk**
- High risk does not necessarily mean that tree planting is ruled out. A different species, different siting or different downwind land management can significantly lower the risk of spread.



Pinus nigra and Pinus contorta pines spreading near native bush in the Rakaia catchment

Common wilding species:

Corsican pine	<i>Pinus nigra</i>
Lodgepole pine	<i>Pinus contorta</i>
Scots pine	<i>Pinus sylvestris</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
European larch	<i>Larix decidua</i>

Tree planting can contribute significantly to hill country development and prosperity if wilding safeguards are taken.

Reference: "Wilding Prevention" by Nick Ledgard & Lisa Langer is available free of charge from: Forest Research Institute, Box 29 237, Fendalton, Christchurch.

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ph 03 365 3828
freephone 0800 EC INFO
(0800 32 4636)

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