Border control!

Biosecurity on the farm

A farmer's guide to preventing weed invasions

Weed infestations can lead to financial loss for farmers and horticultural producers, and seriously harm our natural environment. This guide provides strategies for preventing new weed infestations via human activities.

Many pest plants and weeds are spread by natural means such as birds, wind and water, but farming practices and other human activities can also spread weeds. For example, stock feed originating from overseas or even just from outside the Waikato region increases our biosecurity risks. It might bring in seeds from plants previously not known to be in the Waikato or New Zealand and spread weeds. In 2009, several new weeds were linked to imported coco peat, used for potting mix.

In the Waikato region, 69 plants are legally classified as 'pests' and are subject to control or restrictions under the Waikato Regional Pest Management Strategy 2008-2013 (RPMS). The RPMS requires landowners or occupiers to control pest plants to prescribed standards, using suitable control methods. Besides these classifed pest plants, many other plants with 'weedy' characteristics have naturalised, and these could adversely affect the environment and the region's economy.

Controlling widespread weed infestations can be costly. Prevention of new weed infestations is often the most economic strategy.

Alligator weed infestation on a Waikato farm.

Tips for preventing weed invasions on your farm

1. Be weed aware

- For a list of significant pest plants in your area, call Environment Waikato on 0800 BIOSEC (246732).
- Get pest plant factsheets from Environment Waikato on 0800 BIOSEC (246732) or visit www.ew.govt.nz/plantpests.
- Tell your staff about weeds and pest plants in your area.

2. Clean machinery and equipment

- Remove soil, seeds and vegetation from all machinery and equipment:
  - entering/leaving your property prior to entry/departure. This includes diggers, harvesting equipment, ploughs and undersowers
  - that has been used in weed infested areas on the property before moving it into weed free areas.
- Ask the contractor if they have a weed management plan and use reliable contractors.

3. Buy weed free animal/stock feed

- Ask the seller:
  - to guarantee feed, such as hay and silage, is weed free
  - if you can inspect the crop before it is harvested
  - about any past weed problems.
- If feed comes from overseas, only buy from reputable dealers and ask for a guarantee that it is weed free.
- Inspect feed on arrival. If unsure of weed presence contact Environment Waikato on 0800 BIOSEC (246732) or your farm consultant.
- Keep records of where the product came from and where it is fed out.
- If in doubt, restrict feed out areas.

4. Buy weed free soil, metal, sand and so on

- Ask the seller to guarantee the material is weed free.
- Inspect the material on arrival.
- Keep a record of where the product came from and where it is used.

5. Treat your property boundary like a border

- Movement of livestock, people and vehicles can spread weeds. Seeds can be on boots or animal hooves.
- Do not allow eelers onto your farm as they may inadvertently bring alligator weed with them.
- Be aware roadsides are a common source of new weeds, often spread by roadside mowers.

6. Protect your waterways

- Ensure diggers are completely free of soil and vegetation before entering your property.
- Ensure waterway users, such as duck shooters, have cleaned their equipment before entering your property.

7. Do regular inspections

- Regularly inspect your property for unfamiliar new weeds.
- Check areas of highest risk, such as entrances and feed or soil/aggregate storage areas.
- Inspect waterways annually.

Weeds to watch out for

Alligator weed

Alternanthera philoxeroides

Why it's a problem

- One of the world's worst weeds.
- Toxic to livestock.
- On land, takes over pasture and crops.
- In water, rapidly takes over waterways and drains, impeding water flow and increasing flooding.
- Very difficult to eradicate once established.

Distribution

Limited in the Waikato region, but increasingly spreading onto farms (as at January 2010).

How it spreads

- Small pieces of broken stem or root can easily form new plants.
- Does not set seed in New Zealand.
- Spreads onto farms through movement of soil and agricultural equipment (harvesters, diggers and so on) and in eel fishermen's nets.

Identification

- Variable form, can be difficult to identify.
- Low growing non-woody perennial.
- Leaves in opposite pairs or whorls.
- Flowers papery white, clover-like over summer.
- Hollow stems, often reddish in colour.
- Stem and leaf size varies considerably. Can be very compact in lawns or grazed pasture, much larger when growing in water.

Noogoora bur

Xanthium strumarium

Why it's a problem

- Seeds poisonous to livestock, horses and poultry.
- Burs get caught in livestock fur/wool and contaminate wool.

Distribution

No known infestations in the Waikato region, but has been on a few farms in the past. Recently found on cropping land in the Bay of Plenty (as at January 2010).

How it spreads

- Seed dispersed by burs clinging to wool, fur, clothing and machinery.
- Could be spread to the Waikato by agricultural equipment or crop movement.

Identification

- Annual, growing to 1m.
- Produces hard brown woody burs (seed capsules), covered in numerous hooks and spikes.

Broomcorn millet

Panicum miliaceum

Why it's a problem

- Aggressive, can grow rapidly and easily outcompete most crops.

Distribution

Not yet known in the Waikato, but rapidly establishing in many regions particularly amongst maize and sweet corn crops (as at January 2010).

How it spreads

- Seed dispersed via agricultural equipment, stock feed and crop movement.

Identification

- Annual grass growing to 2m.
- Broad leaf, up to 2cm wide, with a hairy stem.
- Large, black seeds in a large bushy flower cluster resembling a 'witches broom'.

If you think you have seen this weed on your property you should seek professional advice on how to manage it. Contact Environment Waikato Biosecurity on 0800 BIOSEC (246732).

Purple nutsedge

Cyperus rotundus

Why it's a problem

- Highly invasive, competes with agricultural crops.
- Can completely smother crops and remove large amounts of moisture and nutrients from the soil.
- Densities of up to 500 plants per square metre and 400 tonnes of rhizomes per hectare have been recorded.

Distribution

In the Waikato region, limited to a few sites (as at January 2010).

How it spreads

- Spread via transport of tubers on agricultural equipment such as cultivation machinery or through soil movement.

Identification

- A perennial sedge up to 50cm tall with an extensive root systems of tubers and bulbs.
- Dark green grass-like leaves.
- Reddish to purple-brown flowerhead from January to March on an upright three sided stem.

Landowners or occupiers are required to control this weed on their property. Cultivation or harvesting equipment which may have come into contact with it must be decontaminated.

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For more information call Environment Waikato's freephone 0800 800 401 or visit www.ew.govt.nz

Environment Waikato biosecurity series (S2163-0110).

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