August 2025

Arable Update

Maize: Issue 89

On-farm biosecurity: Invasive weeds in maize systems and how to avoid them

Biosecurity

New Zealand farmers need to be aware of three levels of biosecurity incursion risk; border biosecurity, regional biosecurity and on-farm biosecurity. Of these, on-farm biosecurity is the only one you have any control over, and as such, you should take every possible action to avoid any breach of your on-farm biosecurity i.e. have a plan that covers how you can avoid the arrival of any new weed or pest on your property and what to do if you do spot anything you haven't seen before.

Specific biosecurity weeds

The following weed species are of particular biosecurity focus in maize growing areas. Some are already established in New Zealand others are not. The arrival of any one of these on your property should be considered an on-farm biosecurity incursion which could cost you in terms of production and management. They are listed in order of importance/potential impact.

Key points

- Growers have a vital role in preventing new weeds establishing and spreading within New Zealand.
- It is essential to have and proactively implement a biosecurity plan for your property.
- If you find a new weed on your property, don't move or try to immediately kill it, record its location and get it correctly identified by contacting the relevant authority - see below.
- See www.far.org.nz/resources/biosecurity for current biosecurity information.

	Type	Species
1	Velvetleaf *Abutilon theophrasti*	Over 60 properties in North and South Auckland and Waikato.
2	Yellow bristle grass *Setaria pumila*	Throughout the North Island and also Nelson, Marlborough and Canterbury. Weed distribution models indicate that it will grow in all farmed areas.
3	Blackgrass *Alopecurus myosuroides*	Not established in New Zealand despite several recent incursions via contaminated imported seed. A very high risk to arable systems.
4	Palmer amaranth *Amaranthus palmeri*	Not currently in New Zealand but has a clear entrance pathway via imported second hand machinery. Resistant to nine herbicide groups. High risk as very competitive.
5	Alligator weed *Alternanthera philoxeroides*	Present throughout northern New Zealand. Spreads easily, but very costly and difficult to control.
6	Broom corn millet *Panicum miliaceum*	A major weed of sweet corn crops in Marlborough, Hawke's Bay and Gisborne. Has also been reported in maize crops in these regions.
7	Madagascar ragwort *Senecio madagascariensis*	Currently only present in Northland. Primarily a pasture weed, but can invade maize-pasture rotations. Poisonous to livestock, so a major concern.
8	Noogoora bur *Xanthium occidentale*	Found mostly in the Hauraki Gulf but also present in Hawkes Bay and likely to be elsewhere in North Island.

What to do if see a new or unknown weed

If in doubt consider any new weed a biosecurity risk. Do not remove the plants; photograph them, record their location, and immediately contact one of the organisations listed below.

If you are certain it is not a new to New Zealand weed i.e. already found elsewhere in your region, contact FAR for help with identification. If you suspect that the plant could be new to New Zealand, contact the Ministry for Primary Industries, then FAR or Seed and Grain Readiness and Response (SGRR).

Ministry for Primary Industries (MPI) Biosecurity
www.mpi.govt.nz/biosecurity or report.mpi.govt.nz/pest/
0800 88 99 66.

FAR
www.far.org.nz/contact-us
03 345 5783

Seed and Grain Readiness and Response (SGRR)
info@sgrr.org.nz

How to avoid getting invasive weeds?

Create and implement an on-farm biosecurity plan. The key to good on-farm biosecurity is to have a clear plan that is fully understood and actively implemented by all staff. FAR have produced an arable farm biosecurity register to help you create a clear biosecurity plan, not just for weeds but also pests and diseases. Download it from www.far.org.nz/resources/arable-biosecurity-risk-register.

The farm biosecurity register covers:

- Visitors, e.g. contractors and consultants, and their vehicles, clothing, tools etc.
- Machinery.
- Livestock and brought on feed.
- Seed and plant material.
- Tips for monitoring for biosecurity incursions, and what action to take if they occur.

Particular issues for weed biosecurity include: the movement of people, machinery, seeds and animal feeds on the farm and develop protocols for reducing these risks. For example:

- Requirements for machinery clean down and movement on and off the farm.
- Requirements for personnel visiting the farm and specific crops.
- Certification of seeds and ensuring clean seed.
- Specifications for imported feeds and moving feed within farm from known weedy areas.
- Undertaking regular crop scouting, particularly at crop establishment when many weeds germinate, but, also towards and before harvest when escaped weeds are larger, easier to identify and before they set seed.
- Procedures for containing an unwanted weed.

Acknowledgements and further information

This Maize Update summarises information published in FAR Focus 17, Maize weed management, 2025, which is available on the FAR website www.far.org.nz. Information was developed from FAR and AgResearch projects with support from FAR and the MPI Sustainable Farming Fund.

PO Box 23133, Hornby, Christchurch 8441, New Zealand
Phone: +64 3 345 5783 • Email: far@far.org.nz • www.far.org.nz