

ISTA & John Mahon Teagasc Why concern about grass weeds?

8 INCIDENCES OF BLACKGRASS IDENTIFIED IN CROPS FOR SEED IN 2022

Source: ISTA 'TAKING ACTION - Protect your Farm and the Irish Tillage Sector from Grass Weeds' Jan 2023

INCREASING NO. OF CASES OF BLACKGRASS IDENTIFIED IN IRISH ARABLE FIELDS IN 2022

Source: Teagasc, ECT Project, Sept 2022

56% OF BLACKGRASS SAMPLES TESTED IN OAKPARK SHOWING RESISTANCE TO ONE OR MORE HERBICIDES (ALS & ACCase)

Source: Teagasc, ECT Project, Dec 2022

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Certified Seed and Blackgrass?

Zero-tolerance in DAFM/ISTA inspection and certification process

Opportunistic Gaps for grass weeds:

- Choice of field/field history?
- Grass weed identification?
- Inspection frequency/late tillers?
- Herbicide choice/rate/application timing?
- Sources of contamination?
- Integrated weed management (IWM)?

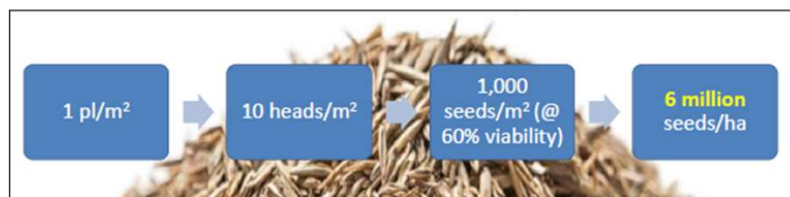
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Apply Cultural & Chemical Control Tactics

- Correct weed identification
- Knowledge on biology and ecology of target weed
- Help you to make informed decisions
- Based on “weaknesses” in the plants life-cycle

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Potential seed production/hectare



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On-farm Hygiene & Integrated Weed Management

- Potential sources of contamination
 - Machinery
 - HSS Seed
 - Organic fertilisers
 - Feed –hay/silage
 - Straw
 - Animals
 - People



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Ultimate Goal for effective blackgrass control

- We must use an Integrated Weed Management (IWM) approach
 - Change perception of herbicide as first 'go-to' option
 - Reduce pesticide use – Green Deal target of 50% reduction by 2030 (June 2022)
 - Protect existing chemistry
 - Use of multiple actives vs single active
 - Use of 'stacking' chemistry
 - Early application – pre-emergence
 - Change mode of action using rotational cropping

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Example: ECT Project - cereal herbicide resistant blackgrass



2019

- Spring barley
- Stale seedbed
- SS Glyphosate
- Increased seed rate
- Hand roguing
- On-farm hygiene

2020

- Spring beans
- Stale seedbeds x 2
- SS Glyphosate
- Direct drill
- Pre-emerge herbicide
- On-farm hygiene

2021

- Spring barley
- Cover crop
- CC Glyphosate
- Increased seed rate
- Delayed sowing
- Hand roguing
- On-farm hygiene

Teagasc, The Tillage Edge Podcast No. 124
<https://www.teagasc.ie/crops/crops/the-tillage-edge-podcast/>

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Example IWM blackgrass control measures

Method	% control achieved		Comments
	Mean	Range	
Ploughing	69%	-82% to 96%	Rotational ploughing has considerable benefits
Delayed autumn drilling	31%	-64% to 97%	The later the better - but increased risk.
Higher seed rates	26%	+7% to 63%	The higher the better - but lodging issues
More competitive cultivars	22%	+ 8% to 45%	Useful, but marginal effects
Spring cropping	88%	+78% to 96%	Challenging on heavy soils; limited herbicides
Fallowing/grass leys	70-80% per year (of seedbank)		Absence of new seeding critical
Hand roguing	up to 90%?		Can help prevent seed return but labour intensive
Mechanical weeding	50-80%?		New equipment required
Spraying off patches in wheat in early June	up to 100%		Glyphosate worst patches - also removes the wheat

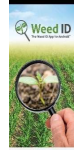
Source: S Cook (ADAS), 2019

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So now - what can I do?

Positive Identification

- Hand lens
- Weed guide
- Workshop



Crop Walk

- At key intervention timings
- More than once
- Don't assume it's not there

Take Samples/Map areas

- Send samples for herbicide resistance testing
- Map all infected areas – you will not accurately remember them
- Monitor progress