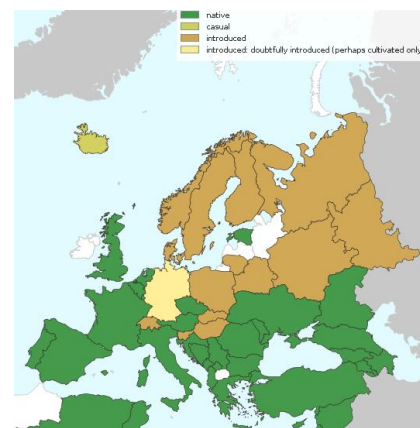


Weed Fact Sheet

Alopecurus myosuroides



Alopecurus myosuroides is the most important herbicide resistant weed in Europe. It is highly competitive, with the potential to produce many seeds per plant. Infestations can increase rapidly and cause substantial yield losses in autumn sown crops.



Weed Biology

EPPO-codes (Latin and common names)	ALOMY - <i>Alopecurus myosuroides</i> ; black-grass or slender fox-tail
Life cycle	Annual
Germination window	80% September - November
Max. generation/year	1
Occurrence in crop or cultivation system	Field margins, hedgerows, headlands of arable fields, non-inversion tillage
Yield loss	12 plant/m ² = 5 % yield loss in wheat 50 plants/m ² = 15% yield loss in wheat 500 plants/m ² = 50% yield loss in wheat
Preferred environmental conditions	Thrives in minimum tillage systems and autumn sown crops. It is favoured by water retentive soils.

Ploidy	Diploid (2n=14)
Pollination	Self and wind
pollen dispersal	By wind
Seed shattering	Before Harvest
Fecundity (seeds/plant)	120-1200
Seed dispersal	By wind/ animals /machinery
Distance of seed dispersal	Mean distance 51cm from plant. Moved in crop seed, straw, manure and machinery
Dormancy	Low
Seed bank longevity	2-4 years
Seed decline per year	68%

Impact of Agronomic measures on Occurrence and Spread

Germination & dormancy

- Germination predominantly from September to November
- Primary dormancy lasts from a few days to a few weeks
- Dormancy is reduced under hot and dry conditions
- Germination occurs from 5cm below the surface

Soil cultivation

- Thrives in minimum cultivation systems
- Ploughing seed to a depth of 15-20cm can be effective in controlling ALOMY
- A fallow period of one year can result in 68% control, two years 98% control

Crop sowing date & seed set

- Delayed drilling or stale seedbed preparation possible
- Seed can be viable within 15 days of anthesis
- Plants should not be allowed to set seed

Crop rotation and competitiveness

Crop rotation with alternation of winter and summer crops, competitive crop varieties and any measure which favour good crop establishment are useful control tools

Weed Fact Sheet

Alopecurus myosuroides

Observed Resistance in Europe

- Resistant populations have been confirmed throughout Europe and are increasing
- Enhanced metabolism resistance results in herbicide detoxification and effects most herbicides, but rarely results in complete loss of control
- ACCase target site resistance effects the 'fop', 'dim' and 'den' herbicides and can increase rapidly
- ALS target site resistance blocks the site of group 2 herbicides, this occurs less commonly than ACCase target site resistance, but this type of resistance is increasing

Target-site Resistance (TSR)

- To both ALS and ACCase. ACCase is present in the majority of populations

Metabolic or multiple herbicide resistance (MHR)

- Present in the majority of populations

Best Management Practices



- to prevent and mitigate resistance development, follow the [Guideline to the Management of Herbicide Resistance](#) published by HRAC Global
- Rotate herbicides from different modes of action on the same weed target throughout the crop rotation and apply them when the plants are small (BBCH11-13)
- Integrate sequential application of soil residual and post-emergence herbicides to reduce selection pressure on post-emergence herbicides
- Monitor results of herbicide applications to allow a timely adjustment of weed control strategies when necessary
- Integrate non-chemical methods:
 - Ploughing down seeds to a depth of 15 -20 cm is an effective weed control method
 - Do not let plants set seed as they become viable within 15 days of anthesis
 - Fallowing the land for period which includes autumn seasons can deplete the seed bank

Weed Fact Sheet

Alopecurus myosuroides



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