

©Stéphane Cordeau, INRAE, 2020

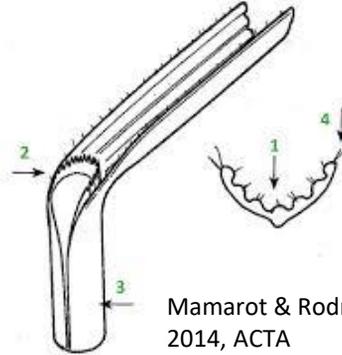
## Identification

*Vulpia myuros* is an annual grass weed, in winter cereals and grasses cultivated with reduced tillage. It is difficult to identify at the vegetative stages, and can be confused with other grass weeds, e.g. *Festuca rubra* and *Lolium* spp. It can thus go relatively unnoticed at early invasion stages.



## Vegetative characteristics

- ❖ slender, 20-80 cm tall
- ❖ erect and mostly glabrous culm
- ❖ long fine leaves (1–3 mm wide)
- ❖ tightly folded prefoliation
- ❖ 5–7 pubescent veins with fine hairs (1 and 4)
- ❖ split leaf sheath (3), generally glabrous
- ❖ very short denticulate ligule (2) (0.2–0.4 mm)
- ❖ auricles absent



Mamarot & Rodriguez, 2014, ACTA

## Reproductive characteristics

- ❖ **inflorescence**: narrow dense one-sided panicle, curved at maturity
- ❖ 5–35 cm long, green to purplish in colour
- ❖ base often enclosed in the sheath of the uppermost leaf
- ❖ **spikelets (K)**: 5–12 mm long
- ❖ short stalks (<1 mm length)
- ❖ lower glume up to 0.4-2.5 mm long and upper glume 2.5–6.5 mm long
- ❖ 3–8 florets
- ❖ lemmas: 4.5–6.5 mm long
- ❖ **straight terminal awns of 5–15 mm length**
- ❖ **fruits**: 3.5–4.5 mm long



Cotton & Stace, 1977, Botaniska Notiser



©Peter Bolliger, Basel, 2006



©HYPPA, INRAE, 2020



©HYPPA, INRAE, 2020

# Identification of rat's tail fescue (*Vulpia myuros*)

## Ecology and Life cycle

### Ecology

- ❖ self-pollinating
- ❖ highly competitive
- ❖ shallow root system
- ❖ tolerant to
  - ❖ low soil fertility
  - ❖ slightly acidic conditions
  - ❖ drought

### Life cycle

- ❖ flowering: May-July
- ❖ high number of seeds produced (1000-2000 per plant)
- ❖ mostly autumn emergence
- ❖ low emergence of buried seeds
- ❖ 1-3 years survival in seed bank

germination					flowering						
S	O	N	D	J	F	M	A	M	J	J	A



©Agroscope, 2015

*Vulpia myuros* in a no-till wheat field



## Information and Contact

This leaflet has been prepared as a collaboration between the Natural Resources Institute (University of Greenwich) and Rothamsted Research, United Kingdom.

For more information, please contact:

Lucie Büchi (Natural Resources Institute): [L.A.Buchi@greenwich.ac.uk](mailto:L.A.Buchi@greenwich.ac.uk)

Laura Crook (Rothamsted Research): [Laura.Crook@rothamsted.ac.uk](mailto:Laura.Crook@rothamsted.ac.uk)

Richard Hull (Rothamsted Research): [Richard.Hull@rothamsted.ac.uk](mailto:Richard.Hull@rothamsted.ac.uk)

## Sources

- ❖ Akhter, M., Kudsk, P., Mathiassen, S., Melander, B., 2021. Rattail fescue (*Vulpia myuros*) interference and seed production as affected by sowing time and crop density in winter wheat. *Weed Science* 69, 52-61
- ❖ Büchi, L., Cordeau, S., Hull, R., Rodenburg, J., 2021. *Vulpia myuros*, an increasing threat for agriculture. *Weed Research* 61, 13-24
- ❖ Cotton, R., Stace, C., 1977. Morphological and anatomical variation of *Vulpia* (Gramineae). *Botaniska Notiser* 130, 173–187
- ❖ Hull, R.H., Mathiassen, S.K., Moss, S.R., 2011. Herbicidal control of *Vulpia myuros* (Rat's-tail fescue) in glasshouse screening tests. *Aspects of Applied Biology* 106, 75–82
- ❖ Mamarot, J., Rodriguez, A., 2014. *Mauvaises Herbes de cultures*, Ed. ACTA, 520 pp
- ❖ Wallace, A., 1997. The biology of Australian weeds. 30. *Vulpia bromoides* ((L.) SF Gray) and *V. myuros* ((L.) CC Gmelin). *Plant Protection Quarterly* 12, 18–28