

INFORMATION ON *FUMARIA* SPECIES DISTRIBUTION IN CEREAL CROPS IN
SOUTHERN AUSTRALIA AND PRACTICAL GUIDELINES TO AID IDENTIFICATION

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Abstract. Five fumitory species have been located and identified as significant weeds of winter growing cereals in Southern Australia. These are *Fumaria densiflora*, *F. parviflora*, *F. bastardii*, *F. muralis* and *F. officinalis*.

Because of an unawareness of species distribution, and identification difficulties, cereal herbicide experiments often list fumitory species incorrectly or just as spp. Hence a confused situation exists regarding distribution of fumitory species, and more importantly herbicidal efficacy differences between species, with herbicides such as trifluralin, metsulfuron-methyl, chlorsulfuron and terbutryn. Field experience suggests that *F. muralis*, *F. bastardii* and *F. officinalis* have a higher tolerance to herbicides than *F. densiflora*, while *F. parviflora* is the most susceptible species.

Field observations during 1988 and 1989 highlighted the fact that *F. bastardii* was present in six DuPont cereal herbicide trials, as the target fumitory species, at Cowra, Wagga (NSW), Dookie (Vic), Naracoorte, Milang and Kadina (SA). This species is widespread, and has probably been incorrectly identified in the past as *F. densiflora* or *F. muralis*.

The writer is not a trained botanist and comments are based on field observations, comparisons of fumitory plants grown in containers and discussion with H. Toelken, Adelaide Herbarium. Guidelines for field identification are based on flower-size, obvious flower features, sepal size and bract size.

F. parviflora and *F. densiflora* can be identified in the vegetative stage, however the other three species need to be at the flowering stage for positive identification.

Flower size is a key classification feature. *F. parviflora* has small (5-6mm) white flowers, and is commonly called "white" fumitory. The other four species are loosely termed "red" fumitory, an incorrect common name for *F. densiflora*.

F. bastardii and *F. muralis* have flowers 9-12mm long and can be distinguished by the clearly separate lower petal of *F. bastardii*. *F. densiflora* and *F. officinalis* have flowers 5-8mm long and are distinguished by the large bract and sepal of *F. densiflora*, and the winged-keel effect on the upper petal of *F. officinalis*.

Growth variation in a competitive crop situation can make fumitory identification difficult however by assessing a random sample of fresh flower-heads positive identification is feasible.

PROPAQUIZAFOP - A SELECTIVE POST-EMERGENCE HERBICIDE
FOR GRASS CONTROL IN GRAIN LEGUME CROPS

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Abstract. Propaquizafop (Correct®) is a new systemic post-emergence herbicide for the selective control of annual grass weeds in broad-leaved crops. Trials in southern Australia since 1987 have indicated Correct at rates between 20 and 45 g ai/ha provides effective control of a range of grass weeds, when applied prior to the end of tillering. An outstanding feature of Correct is the high tolerance level exhibited by broad-leaved crops. All crops tested exhibit tolerance to at least 240 g ai/ha.