The distribution and significance of saffron thistle (*Carthamus lanatus* L.) in New South Wales

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Saffron thistle infests a major area of crops and pasture in Australia. In pasture the spines of saffron thistle cause physical damage to livestock, which make stock susceptible to diseases (Watson, 1990). The thorny nature of saffron thistle restricts livestock movement, reducing the effective carrying capacity of pasture. Saffron thistle is reported to cause a yield reduction in cereals. The seed of saffron thistle as a contaminate of grain results in the downgrading of the value of the grain.

The results of a survey of New South Wales local government weed inspectors found saffron thistle to be the most economically important weed of New South Wales (Briese 1988). This paper follows the initial survey conducted in 1986 (Briese 1988), reviewing the changes in geographical distribution of saffron thistle and agricultural importance.

Methodology

In 1995 a questionnaire survey was sent to 53 New South Wales district agronomists. The survey requested information regarding: the presence of saffron thistle infestations; the infestations which are considered to be a problem; the crop/pasture situation in which saffron thistle was considered to be a problem; and the need for control.

Results and Discussion

Of the response, 85 percent reported saffron thistle infestations. Infestations occurred in all cropping/pasture situations, with high incidence in pastures (82 %), cereal crops (46 %), lucerne (29 %), oilseed crops (24 %) and grain legume crops (24 %). Control of saffron thistle was considered warranted in 63% of the surveyed districts.

Further to a earlier survey of saffron thistle conducted in 1986 (Briese 1988) the significance of saffron thistle has not altered, indicating that current control strategies are ineffective. Current control methods aim to exhaust seed reserves in the soil by using a combination of mechanical, chemical and cultural practices (Fromm 1990). To achieve effective control it is important to prevent seed set over several years. The delayed germination of saffron thistle within seasons adversely effects the outcome of any applied control strategy. Further problems are associated with the control of saffron thistle such as the non selectivity of herbicides in pastures and the costs involved in eradication. Until these concerns are addressed saffron thistle will remain a significant problem in New South Wales.

References

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