

Extension can play a vital role in creating awareness of weed problems and fostering the establishment of self-help weed destruction groups. These groups appear to be the most effective means of obtaining adoption of control measures over an area sufficiently wide to significantly influence the population dynamics of a noxious plant.

THE LOVEGRASS DILEMMA ON THE NORTHERN TABLELANDS  
OF NEW SOUTH WALES

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*Eragrostis curvula* 'chloromelas' strain is a problem on the highly productive Tablelands due to its poor winter growth and palatability but it could be a useful species in the dry, warm, lower altitude areas, particularly on granite soil.

Environmental change can result in useful pasture species becoming unwanted aggressive weeds.

Gidley (1969) reported that trial sowings of chloromelas in the Inverell district gave encouraging results under sheep grazing on low fertility granite soil. However, in the adjacent higher altitude areas of Tenterfield and Glen Innes (>800 m above sea level), where intensive pasture improvement has been undertaken, chloromelas is proving to be a difficult species to handle.

In a survey of the Tenterfield district (Auld, Scarsbrick and Chaffey 1970) this grass was found to be invading both improved and unimproved pastures to a similar degree.

Chloromelas utilization trials with sheep (Simpson, unpublished) in the Tenterfield district indicated that sheep gained body weight during summer but lost weight rapidly during winter due to reduced intake as palatability declined after frosting.

The plant has a prostrate smothering growth habit. It dies in the centre and tillers from the perimeter, tending to smother neighbouring plants. White clover has difficulty in competing with this species.

Studies in the Tenterfield environment (Scarsbrick, unpublished) indicate that chloromelas will colonize both high and low fertility situations, shows some drought tolerance and

responds to high applications of nitrogen in midsummer (60 kg/ha dry matter/kgN/month), which also increases intake and acceptance by stock. The plant will germinate and reach anthesis in 60 days, is capable of producing 360 kg/ha of seed, and with approximately ~~6.5 million~~ seeds per kg this plant has a tremendous potential for spread.  $*6.5 \times 10^5$

Trial work (Scarsbrick, unpublished) indicates that chloromelas is susceptible to low rates of 2,2-DPA, with 6.5 kg/ha giving adequate control. Lucerne, clover and *Phalaris aquatica* are tolerant to 6.5 kg/ha 2,2-DPA, making it possible to remove chloromelas from these pastures at reasonable cost.

Siro 1146 hybrid phalaris, under trial conditions, is proving to be an ecological match for chloromelas. However, seed production of the hybrid phalaris still remains a problem.

#### THE EXTENSION PROGRAM

Farm visits, field days, group meetings and mass media have been used to outline the problem of chloromelas and publicize the control recommendations.

The landholder has to choose between 'living with' chloromelas in a native pasture situation or ploughing and sowing improved pastures.

In the improved pasture situation boom spraying with 6.5 kg/ha 2,2-DPA will tip the ecological balance back in favour of the winter growing species.

#### RESULTS AND LANDHOLDER ATTITUDE

The dilemma (spray or graze?) in the minds of graziers and the cost has resulted in only limited adoption of the control recommendations.

Landholders with lucerne or phalaris/white clover pastures infested with chloromelas are adopting the control recommendations to protect their investment.

The extensive spread of this lovegrass has meant that declaration of this species as a noxious weed would be of little value. It is not economically possible to treat the massive roadside infestations that exist in the Tenterfield district.

The 'chloromelas' strain of *Eragrostis curvula* has demonstrated a definite weed potential on the Northern Tablelands of New South Wales and any release of this grass as a pasture plant must be viewed with concern.