

AFRICAN LOVEGRASS, *ERAGROSTIS CURVULA*, IN WESTERN AUSTRALIA

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*Summary.* African lovegrass, *Eragrostis curvula* has spread widely, particularly along major roads, throughout the south-west land division of W.A.

Some farmers regard it as a valuable plant for animal production and soil conservation, while others argue that it is an unpalatable weed. This may be because some 'types' are more invasive and more palatable than others and hence are able to withstand greater grazing pressure.

There has been limited invasion of pastures in W.A. however, its potential in this regard may not have been realised. Landholders would be well advised to establish and carefully maintain vigorous pastures adjacent to roadsides where African lovegrass has established.

## INTRODUCTION

During the 1984 Noxious Weed Workshop of the Australian Weeds Conference, held in Perth, both N.S.W. and Victorian delegates expressed their concern at the wide distribution of African lovegrass in W.A.

Over the last decade African lovegrass has become a widespread pioneer plant, particularly of roadsides, but little concern has been shown in W.A. in the belief that it would not encroach upon or invade arable land where grazing or cropping enterprises exist.

Experience in both Victoria and N.S.W. has demonstrated the plant's weed potential, and there has been experimentation to find suitable control methods in these states. African lovegrass has been declared noxious in 18 shires in N.S.W. where 45,000 ha was reported in 53 shires (2).

Victoria declared African lovegrass a noxious weed in January 1984, while S.A. classified it as an agricultural pest plant early in 1986.

## SURVEY

During 1985 field officers of the Agriculture Protection Board (APB) were asked to record sightings of African lovegrass on all land including roadsides in W.A. This information has been entered on the Board's computer. Up to April 1986 staff had made 2,738 inspections on 2,620 properties and entered 991 positive sightings of African lovegrass.

African lovegrass is confined to the southern part of W.A. below the 26° S parallel. Most of this infestation is to be found in the south-west agricultural areas of the state with roadside and rail infestations extending into the Eastern Goldfields and the Nullarbor Plains.

Farm infestations, albeit mainly on roads, holding paddocks, raceways and around farm buildings in the south coast shires of Esperance and Jerramungup made up 114 of the state total of 192 properties that recorded African lovegrass. The area infested on farms was also high in these regions with 423 ha of a state total on-farm area of 673 ha.

These two southern regions also had many non-farm and roadside infestations. One hundred and sixteen of 782 non-farm properties, 1293 ha of the 10, 521 ha state total and 637 km of the total 4342 km were recorded.

The reasons for the greater abundance of African lovegrass infestations in the southern region are not clear but conditions such as more suitable climate and/or soils, or early establishment of the plant spreading from eastern states may be partly responsible.

#### SPREAD

African lovegrass was introduced to W.A. as a potential pasture plant by Barrow Linton Co. and possibly others in about 1960. It was tested in the field by CSIRO researchers at Pinjar Research Station and several country locations (A.W. Humphries. pers. comm., 1986).

African lovegrass probably arrived in W.A. via the railway and via the Eyre Highway at about the same time, as both have the weed present along their entire length. Secondary spread has been predominantly along roads in the south-west land division where it is present on every major highway and many side roads.

African lovegrass occurs in all Perth suburbs, particularly along roadsides, railway reserves, wasteland and poorly managed recreation areas.

The natural attributes of the plant, viz. copious seed production, vigorous seedling growth and low palatability, suggest a potential for invasiveness. Workers in N.S.W. suggest that the invasion of paddocks was related to the plant density on adjacent roadsides and that both improved and unimproved pastures could be invaded. While spread is reduced by vigorous pastures, dry summers, sandy soils and cultivation apparently provide opportunities for lovegrass establishment (1).

#### EFFECT ON CROP AND PASTURE PRODUCTION

African lovegrass has not been noted in cereal crops, however in the Albany, Esperance and Moora regions it slowly encroaches on grazing properties where there is no cultivation. It spreads from adjacent roadsides into holding paddocks where there is little or no grazing management and the pastures are of poor quality.

In the Harvey region where extremely heavy roadside infestations occur, the grass has spread into adjacent unstocked paddocks and wasteland areas. At Geraldton, Three Springs, Katanning, Busselton, Manjimup and Kalgoorlie, the infestations are concentrated on roadsides and railway reserves.

Losses in pasture production have only been reported in the Esperance region. African lovegrass replaces more desirable species reducing the palatability of pastures.

#### NON AGRICULTURAL SIGNIFICANCE

In the Esperance regions, African lovegrass competes aggressively with native species on road verges, but this does not appear to be the case elsewhere.

Engineers of the Main Roads Department and Local Authorities claim that African lovegrass is a problem on road shoulders where it may lift the bitumen and interferes with shoulder grading. It also obstructs traffic vision,

reduces drainage efficiency and causes fire hazards.

The Main Roads Department spend a significant amount controlling this grass on roadsides.

It is also difficult to control in turf and recreational areas, where it detracts from the aesthetics and usefulness of these areas.

#### COMMUNITY ATTITUDES

Apart from the problems associated with road maintenance, there has been little reaction by farmers, farmer organisations, environmentalists, land managers, the general public or staff of the APB about the weed and its rapid spread.

No APB officers have reported cases where farmers are particularly worried about the plant. Most farmers claim that African lovegrass does not persist under grazing or cultivation, and therefore does not constitute a threat to agriculture.

#### REFERENCES

1. Auld, B.A. and Scarsbrick, B.D. 1970. J. Aust. Inst. Agric. Sci. 36, 296-297.
2. Campbell, M.H. 1983. Aust. Weeds 2, 107-112.