

# Eragrostis Curvula(schrad.) Nees (weeping Lovegras, Oulandsgras)

*Submitted by: SANSOR*

*Eragrostis curvula* is commonly grown in the higher rainfall eastern seaboard areas of South Africa from central/southern Mpumalanga through KwaZulu-Natal and into the eastern Cape. It grows particularly well where the rainfall exceeds 600mm. Although it is today more commonly used as a hay and grazing crop it was first explored to re-seed and rehabilitate eroded and degraded areas and also promoted as a ley crop on nutritionally depleted soils. Because of its success and popularity, a considerable amount of research work on the crop has been undertaken throughout the potential pasture growing areas of the country.

*Eragrostis* is a summer growing, indigenous perennial grass which characteristically forms large dense tufts, but is an extremely variable species in its growth form. The more common varieties can be divided, according to leaf colour, into the green curvula types such as Ermelo, American leafy, Morpa and Ungeni or the blue Robusta types such as Witbank, Kromdraai and Agpal, blush-green variation often occurs in the latter group. It is one of the grasses in the large apomictic group of sub-tropical grasses.

The reason for Lovegrass being so popular is because it has the advantage of versatility. It establishes easily, from small quantities of seed, on both sandy and acid soils, produces relatively soon after establishment and is long-lived. Despite yielding well in the first season it has the added advantage of being resistant to eelworm and having a large, dense root system.

As a pasture species, it is valuable for early spring grazing, since it commences growth earlier in the season than most other summer growing species. It does however, have the disadvantage of being unacceptable to livestock. Its popularity as a hay crop is because it is relatively ease to cure. The quality of the pasture as grazing or of the hay produced is dependent on fertilization the fertility status of the soil and stage of utilization. Well fertilized pastures, mown at very early piping stage, should yield in excess of 12t/ha dry matter, with higher rainfall yields in excess of 15t/DM are not uncommon.

## ***E. CURVULACV. UMGENI***

Much of the general introduction on weeping lovegrass applies to most of the known varieties including cv. Umgeni. Trials were conducted in KZN, on the highveld (Nooitgedacht Ermelo) and in Zimbabwe between 1970-80. The pertinent points from these trials are summarised to indicate the performance of cv. Umgeni.

### ◆ **DRY MATTER PRODUCTION**

Most researchers, from comparative studies, recommend that cv. Ermelo was as good as if not better than all the other commonly used strains. Using cv. Ermelo as the standard cv. Umgeni produced similar yields at both Cedara and Thabamhlope in the sourveld. The 5 year mean at this latter site was 13.6 vs 13.8t/ha for cv's Umgeni and Ermelo respectively.

#### ◆ ANIMAL PREFERENCE

Trials at Nooitgedacht using sheep given free choice of various selections of *E. curvula* recorded conflicting results between years. The minimal differences between Ermelo and Umgeni prompted Prof. Rethman to conclude that he had decided to stick to 'good old faithful' viz. cv. Ermelo.

However, in 1980 two Zimbabwe users were more positive in their conclusions to quote:

- 'in grazing trials, sheep and cattle preferred cv. Umgeni to all other varieties of *Eragrostis*, probably because of its fine soft leaf';
- 'my impressions of the grass are very high from a grazing point of view. It is made up almost entirely of leaf. It comes away green in September before our rains and my cattle keep it flat until Christmas'.

#### ◆ HAY POTENTIAL

South African research failed to identify a superior strain within the green curvula and blue robusta types except when mature grass was mown for hay when the curvula types generally appeared less stalky. However, the Zimbabwe opinion was that although cv. Umgeni was less vigorous than cv. Ermelo yields were equal because of the abundance/denseness of very fine leaves on cv. Umgeni. For this same reason (fine leaves) haymaking was simplified with cv. Umgeni because of the faster drying complete haymaking in a day.

#### ◆ FORAGE QUALITY

It has been a general finding that balanced fertilization is a prerequisite for palatable herbage and thus improved quality because of improved digestibility cv. Umgeni was no different to any other selection.

#### ◆ SEED PRODUCTION

Generally produces less seed than other cultivars because of its smaller seed head.

#### ◆ RESISTANCE TO SOIL NEMATODES

This characteristic appears to be a distinct advantage cv. Umgeni has over all the other cultivars. The following was said of cv. Umgeni:

'Apart from the direct effect on subsequent crops it has also been recorded that it has a depressing effect on survival of soil nematodes, which is an important consideration in cropping areas'.

In glasshouse trials in Zimbabwe using nematode susceptible tomatoes as indicator plants cv. Umgeni was slightly superior to cv. Ermelo. However, in summation it was written that 'the tomato assay indicated that only cv. Umgeni reduced the nematode population to less than the commonly grown Ermelo strain'. As a consequence of the results from the Zimbabwe trials the then Rhodesian Tobacco Board gave Umgeni full approval as a tobacco rotation pasture.

Pasture growers although usually only too keen to attempt something new, invariably resist change unless it is a fairly conclusive improvement. Research results suggest that cv. Umgeni is little different from cv. Ermelo in most attributes thus not justifying the need for change. The only exception possibly being its resistance to the rootknot nematode: *meloidogyne javanica*.

Lastly the Zimbabwe findings have generally proved more positive and conclusive than local evaluation. The geographic location may possibly partially account for some of these differences.

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