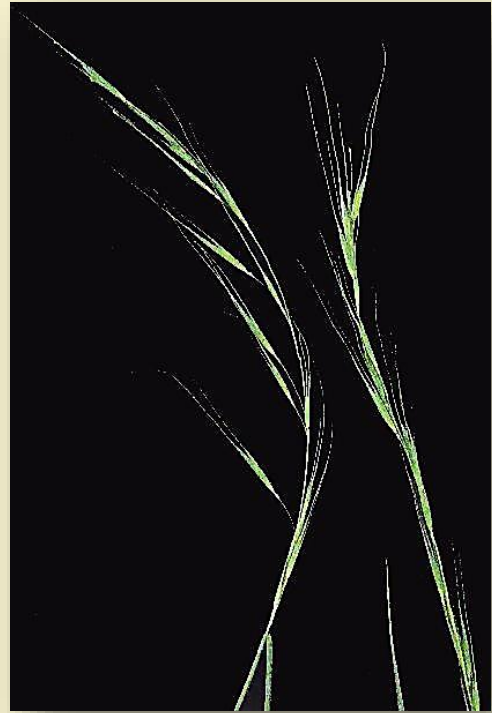


Microlaena stipoides

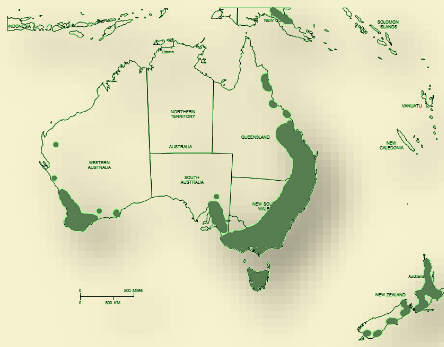
Weeping Rice Grass



Weeping Rice Grass, or *Microlaena stipoides*, has become popular in recent years for its attractive weeping habit. It also provides an Australian native alternative to the typically African species that traditionally comprise our lawns and playing fields. It is both a valuable pasture plant as well as being ideal for revegetation of degraded areas. There are even optimists among agronomists who look to its potential as a wild-grain crop.

Pasture and turf grass

Microlaena is a perennial C₃ grass, widespread in Australia where it has an exceptionally broad latitudinal distribution. Remarkably, it is endemic to a wide range of climates, making it a candidate for the future temperature extremes. For example, it occurs in northern New Zealand, Papua New Guinea, Indonesia and the Philippines. Weeping grass is a productive and nutritious pasture for sheep and cattle, tolerating drought, frost and shade. With its robustness under competition, efficient use of water and capacity to grow on a range of marginal, low nutrient soils, it has potential as a



Approximate distribution of *Microlaena stipoides* in Australia, New Zealand and Papua New Guinea from *Atlas of Living Australia*.

commercial turf grass. However, at up to \$380 per kilogram for seed it remains uneconomic for current agricultural enterprises.

Edible cereal

Microlaena is a grass in the family Poaceae and is related to rice, both are in the grass **subfamily Oryzoideae**. The grain is similar in size to that of rice, is high in protein and reportedly with a pleasant taste. Importantly, it has another key trait– it is **perennial**. Perennialism allows for less energy-demanding land management and reduces salinity and erosion. Natural variation in seed yield and growth characteristics suggest that plant breeders would be able to exploit genetic diversity in future breeding programs.



Revegetation



In recent years there has been much discussion about whether to use locally sourced seed for bushland regeneration or not. Recommendations to use locally sourced seed have largely followed Northern Hemisphere assumptions that revegetation species are cross-pollinated, but this isn't the case for Australian native grasses, which cross-pollinate at very low rates. Self-pollination complicates breeding new varieties that are needed for resilience in our variable Australian climate. Furthermore, the genetic difference among populations has been found not to be related to the distance by which they are separated, rather by environmental selection pressures. So, for Australian native grasses, rather

than sourcing locally grown seed, it appears to be more productive to source seed from regions that match the environment of the location to be revegetated as these are more likely to carry stress-tolerance genes. Mixing populations from several environmentally similar locations is also recommended to increase genetic diversity of seeds.

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Map sourced from Atlas of Living Australia:

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