

Tropical Grassland Society of Australia Inc.

2008 Presidential Address

The changing face of the Australian tropical pasture seed industry

TONY ILLING

*Illing Pastures, 57 Gipps Road, Drayton,
Toowoomba, Queensland, Australia*

The tropical pasture seed industry in Australia today is small and relatively young (approximately 50 years) in comparison with Australian agriculture. Like other agricultural industries, the pasture seed industry has had to endure and adapt to downturns in the cattle industry (1975), droughts and the withdrawal of matching R&D funding from government. Many changes have occurred over time but, in general, the personnel, the companies and the general structure of the industry have remained the same.

Crossroads coming up

During my 20 years in the industry, I have had the advantage and privilege of working for progressive companies and learning from the researchers and seedsmen who developed the industry into what it is today. However, the tropical seed industry is at the crossroads, and it will change quite dramatically over the next 5–10 years. Many researchers, agronomists and seedsmen, along with their knowledge and skills, are leaving the industry or are not far from leaving and this loss of expertise will impact on both the tropical seed industry and producers. If climate change is the earth-destroying man-made phenomenon that some scientists claim it to be, now is the time for increased investment in plant breeding, extension and improving grazing management.

Plant Breeders Rights

Plant Variety Rights (now Plant Breeders Rights, PBR) were introduced in the late 1980s in Australia under the ‘user pays’ banner being waved around by governments at the time. In

principle, the system had merit. In return for exclusive marketing rights to a variety, a company would submit a tender that often contained an up-front payment, continuing royalty payments and a marketing plan. The funds generated would be used to support further breeding work.

Unfortunately, the reality has proved to be very different. The CSIRO Division of Tropical Crops and Pastures no longer exists and the Department of Primary Industries and Fisheries Queensland seems to have little focus on pastures. The small volume of pasture seed sold in the domestic market has limited the amount of privately funded breeding being conducted by seed companies, and has limited the amount of revenue raised from royalties. Much of the breeding taking place at the moment (which is small anyway) is biased toward the export grass seed market, so any focus on Australian conditions needs to be funded collectively by industry and government, if significant advances are to be achieved.

On the negative side, seed of PBR varieties has, at times, been in short supply (with the exception of rhodes grass). This has been because the companies that own the varieties have to fund the production of the seed as well as any carry-over of unsold seed, whereas the costs of producing and marketing the open-traded varieties are borne by a larger number of producers and merchants. Given that the recent poor seasons generate erratic demand, it is understandable that companies with PBR varieties reduce production during dry years or keep it at a level that ensures limited carry-over. I consider that this has prolonged the time for good varieties to reach their potential; in fact, some varieties in the market may never reach their potential. However, there is a positive aspect. PBR has created a more secure environment for seed producers, who now have access to contractual arrangements with seed companies that are not available on many open-traded varieties.

Coated seed

The issue of coated seed is a bit like religion and politics; if you want a good argument, just jump on the coated seed bandwagon. However, despite the diverging views on the merits of coating seed, coated seed is here to stay. There are now 6 companies in Queensland with their own coating plants, or with access to them. They have invested hundreds of thousands of dollars in infrastructure, and will not abandon it just because some individuals do not like the concept.

In the 1970s, Wright Stephenson was the first seed company to coat seed in Australia but did not coat seed of tropical species. It was not until 1987 that Hodder and Tolley began coating seeds of subtropical species under the trademark 'Nutriprill'. Nutriprill had a large, hard membrane that failed to break down until it had absorbed a lot of moisture, so germination was delayed. Since then, the coating process has evolved, the polymers are more advanced and the membranes dissolve rapidly to allow rapid germination.

There is no doubt that coating temperate species provides the consumer with real agronomic advantages. Seed can be treated with chemicals such as Gaucho or Apron, and the strains of rhizobia are tough enough to allow for the pre-inoculation of legumes. However, coating grass seed does not seem to provide the same agronomic advantages. I am not saying that this will not change in the future but, to date, I have not seen any **independent** research results which prove otherwise. During the years I have spent in the field, the only advantages I have seen have been: better ballistic properties; and allowing the seed to be planted through conventional equipment.

Other claims include:

- ant protection — pelleted seed is not necessarily treated against ants, and most coated seed on the market does not contain an insecticide.
- fertiliser — apart from molybdenum, subtropical species do not respond significantly to micronutrients and it is not possible to place enough of the major elements in the coating to assist the seedling.
- pre-inoculated tropical legumes — as far as I can understand, few of the tropical strains of rhizobia can survive in a pellet for any length of time.

In my view, seed companies that coat seed have not chosen the most appropriate way to market their product. Over the years, they have recommended low planting rates in an effort to keep the price per hectare at a level to compete with bare seed. The resulting poor establishments and sparse stands have given users a bad impression of the benefits of coated seed. It is essential that planting rates are high enough to provide the same numbers of seeds per square metre as the equivalent bare seed planting rate. In my experience, growers want results and most do not mind spending the extra dollars per hectare to achieve them.

There also needs to be uniformity in how the product is labelled. At present, labelling indicates the percentage of seed in a bag as percentage by weight, percentage weight increase from coating and seed:coat ratios. Until labelling includes seeds per kilogram, it is difficult to compare apples with apples when purchasing or selling seed.

Industry segregation

The lack of a specific industry body representing the tropical pasture seed industry is an issue that must be addressed. Currently, the Australian Seeds Federation represents the industry but it focuses on the temperate and hybrid seed industries, which are much larger and wealthier. Since the Federation's office is in Canberra, it is also geographically separated from those it represents in the tropical pasture seed industry.

We need a specific industry body that can focus on issues specific to Queensland and northern NSW, such as labelling, seed production, revenue raising for further research, marketing and standards, as well as to provide objective information to counter the spurious claims of some environmental scientists. Other agricultural bodies such as the Australian Mungbean Association have proved that collective marketing, promotion and research can be a powerful tool.

Seed production

In the 1970s and 80s, the seed production areas were diverse; the Northern Rivers of New South Wales, central and southern Queensland and the Atherton Tablelands in north Queensland were all major production areas. Today, only small

amounts of seed are produced in the Northern Rivers and central and southern Queensland and most of our production is based on the Atherton Tablelands. As Cyclone Larry has illustrated, having virtually all production coming from one area can result in serious consequences in the event of natural disasters. New areas such as the Burdekin Region need to be investigated and possibly developed. While a small amount of seed is currently produced in that area, there is scope for much more.

Drought and the lack of specialist pasture extension personnel have also had an impact on opportunistic seed production of 'bread-and-butter' species. Seed of varieties such as green and Gatton panics, Bambatsi panic and purple pigeon grass is in short supply and the prices have increased accordingly. There is a general lack of information available to growers on how to fertilise, control weeds and harvest in production blocks. As a marketer, I have found that the shortages have helped with seed sales but, in the longer term, the decline in seed quality and supply may have a negative impact on the seed industry.

Environmental weeds

Over the past few years, agriculture has become a popular target for environmentalists and politicians, and it will remain a target in decades to come. It matters little to these people that agriculture produces food and fibre for our nation and the world and remains a major income earner and employer for the economy.

The banning of the sale of Gamba grass by the Queensland Government in 2008 brought the

fight to the doorstep of the tropical seed industry, and I consider that all involved in agriculture have reason to be concerned. I speak at field days on a regular basis and the emerging message from the environmentalists is that the introduction of improved species is damaging the ecology. The Weeds CRC (Co-operative Research Centre) web site openly stated that buffel grass was an environmental weed; other species on the environmentalists' hit list include green panic, Bambatsi and leucaena, so I consider the tropical seed industry will have its own environmental issues to deal with in the future.

The Environmental Protection Agency now requires native species to be used by the Department of Main Roads when stabilising areas and by mining companies for mine rehabilitation. This agency apparently does not understand that native species are soil-specific and that, in many cases, most of the stipulated species will not grow where they need to be planted. Similarly, it does not understand that naturalised species such as rhodes grass and green panic will soon dominate in the areas planted and that the cost to the tax payer of planting native grass species is up to 10 times that of planting the naturalised species, with little or no benefit.

I have followed with interest the debate on global warming and the exclusion of agriculture from any future carbon trading scheme for 5 years. The reporting (mostly negative) is focussed on carbon emissions from agriculture but not the amount of carbon agriculture sequesters. Instead of reports acknowledging the positive outcomes from agriculture, those involved in agriculture are accused of indiscriminate tree clearing and destroying the Murray Darling — and the list goes on.