

## PARA GRASS IN THE NORTHERN TERRITORY—PARENTAGE AND PROPAGATION

R. N. WESLEY-SMITH\*

### ABSTRACT

*Para grass (Brachiaria mutica) grown from seed from Queensland produced viable seed, whereas local para grass established from cuttings did not. The origin of para grass in the Northern Territory is discussed.*

### SOURCE OF PARA GRASS IN NORTHERN TERRITORY

Para grass was established in the Darwin Botanical Gardens at about the end of the last century. W. M. Curteis (1965) suggested that the curator of the gardens in 1907, Nicholas Holtze, thought of para grass as "coapim" grass, and certainly his description may fit: "This grass was introduced from Africa a good many years ago, and for wet ground it appears the perfection of a fodder grass, and is green and succulent during the driest part of the year. It does not seed, but spreads very quickly by the long shoots it sends out from all sides. In the nursery it makes splendid growth, and has taken possession of a good deal of waste ground, and is rather a nuisance among cultivated plots. I have tried it in numerous places in the bush, but so far unsuccessfully" (Parliamentary Papers, 1907).

However, Nicholas' father, Maurice Holtze, wrote: "I have to thank Sir Ferd. Baron von Muller, Government Botanist of Victoria, for . . . . the true *panicum spectabile*, or coapim grass" (Parliamentary Papers, 1891). *Panicum spectabile* is listed by the C.S.I.R.O. (1953) as "African wonder grass".

The arrival of para grass in the Northern Territory is remembered by Mr. E. S. Herbert and Mr. O. S. Herbert of Koolpinyah Station near Darwin. They explained (personal communication) that their father Judge Charles E. Herbert, Government Resident in Darwin 1905-1910, in the latter part of his term visited the Indonesian region and brought back cuttings of two grasses, *Panicum muticum* and *Panicum barbinode*. These were planted as runners at Bankers' Jungle on the southern end of Koolpinyah, and cuttings were given to Nicholas Holtze and sent to Oenpelli.

This would be confirmed by the fact that para grass near Darwin was known as Koepang grass until after World War II (M. Sargent, personal communication).

The approved botanical name (C.S.I.R.O., 1953) of both *P. muticum* and *P. barbinode* is *Brachiaria mutica*. The identification of the local naturalized para grass as *Brachiaria mutica* was confirmed (N. Byrnes, personal communication, 1972).

### PROPAGATION OF PARA GRASS

Para grass is a trailing perennial grass ideal for wet areas of the tropics and subtropics, and is about the only introduced pasture species suitable for swamps and floodplains in the coastal end of the Northern Territory where it is already very useful as feed for cattle and buffalo (Miller, 1970).

Although para grass produces flower heads quite profusely, it is a "poor seed producer" (Whyte, Moir and Cooper, 1959). In Queensland, seed may be collected from flowering heads of para grass only in the northern latitudes along the coastal areas where it is grown (Grof, 1969). In the Northern Territory it rarely sets viable seed and so plantings have been from cuttings. Seed collections over four years from three sites and after many experimental treatments had been applied, resulted in no mature seed being obtained by the author, although some caryopses were found and a few germinated from one collection (P. Harrison, personal communication).

\* Animal Industry and Agriculture Branch, Department of the Northern Territory, Australia.

However, in 1973 seasonal conditions resulted in the late maturing of many pasture species, and para grass seed, harvested as before, yielded a low level of mature seed, some of which germinated.

The environmental factors which determine seed set of para grass are not known, although a low latitude appears to be essential. The para grass studied in the Northern Territory was about latitude 13°S. Apparently seasonal conditions influence the development of viable seed, and local seed collection may be possible in certain years.

In 1970 Mr. Roy Gubb at Adelaide River near Darwin sowed para grass by seed bought from Queensland, and an excellent stand resulted. Nitrogen fertilizer was applied and in early and mid-April harvests of seed heads were made by hand. Viable seed with over 20% germination was obtained quite readily.

This result suggests that the para grass which has been locally established for many years was of different genetic origin to the para grass from Queensland, or else that the original Northern Territory strain has partially lost the ability to produce viable seed.

#### ACKNOWLEDGEMENTS

I would like to thank the following for help with this investigation: Messrs. E. S. & G. S. Herbert, G. Calder, L. Ah Toy, R. A. Gubb, the State Librarian of South Australia, S. M. Phillips, G. R. Easton, D. Hansen, P. Harrison, N. Byrnes, G. Brown, N. Lothian, M. Sargent and P. Spillet.

#### REFERENCES

- C.S.I.R.O. (1953)—Standardized Plant Names. Bulletin No. 272, Melbourne, Australia.
- CURTEIS, W. M. (1965)—The early history of agriculture and settlement in the Northern Territory (Australia)—Unpublished report, Animal Industry and Agriculture Branch, Darwin, Northern Territory.
- GROF, B. (1969)—Viability of para grass (*Brachiaria mutica*) and the effect of fertilizer nitrogen on seed yield. *Queensland Journal of Agricultural and Animal Sciences* 26: 271.
- MILLER, I. L. (1970)—Para grass. Northern Territory Administration. *Turnoff* 2: 2.
- PARLIAMENTARY PAPERS SOUTH AUSTRALIA, 1891 and 1907.
- WHYTE, R. O., MOIR, T. R. G., and COOPER, J. P. (1959)—Grasses in Agriculture. F.A.O. Agriculture Series No. 42.

[Accepted for publication June 19th 1973]