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Paspalum Vaginatum for Salt Land

By G. H. BURVILL, M.Ag.Sc, Commissioner of Soil Conservation

RECENT press publicity has emphasised the salt tolerance of the grass Paspalum vaginatum, which is also called Sea Shore Paspalum. This grass is available in Western Australia, and in recent years the Department of Agriculture has distributed small quantities of runners and roots to a few hundred farmers in the agricultural areas. A number have reported considerable success in growing this salt-tolerant grass on wet salt-affected areas which were previously bare.

As there are hundreds of similar salt patches on farms in the 15 to 30 inch rainfall areas, the planting of Paspalum vaginatum has been a standard recommendation by the Department for several years. A leaflet (No. 1054) dealing with it was issued in 1951 and copies are still available.

All salt-affected areas in Western Australia are not suitable for Paspalum vaginatum, as many are too dry in summer when the grass makes its main growth. Seepage areas which are still wet in summer are most suitable. These usually contain brackish water which becomes too salt for our common crop and pasture plants, and soil erosion often starts on these bare sloping areas. Paspalum vaginatum can thus help to control erosion as well as supplying summer green feed. A few farmers have been interested in the establishment of this grass on salt flats and its irrigation with brackish water from adjacent springs.

In past years many farmers who have tried small plantings of Paspalum vaginatum have failed because rabbits or stock destroyed it. First plantings should be protected by rabbit fencing if possible. Very boggy patches are good centres in which to start establishing the grass. As rabbit numbers have been greatly reduced by myxamatosis and other measures in many districts, the chances of success with Paspalum vaginatum plantings have increased in recent years.

So far, the propagation of this grass has been by roots and runners because no seed has been available. The grass flowers freely in summer but no seed is produced. Last summer, however, Departmental officers working on salt land investigations collected a small number of viable seeds. The failure to form seed has been studied by Mr. J. A. Carpenter at the University Institute of Agriculture and he has reported that, while the local strain produced no seed, some viable seed was produced by a strain of Paspalum vaginatum which the Department of Agriculture obtained from Queensland about 18 months ago. It is also hoped that some seed may be obtained through the Department of Agriculture in Mauritius, which I visited last year.

Paspalum vaginatum occurs naturally in coastal areas, both in tropical and temperate regions, on the east and west coasts of the American continent, and on both sides of the African continent. It is recorded on the east coast of Australia and the North Island of New Zealand but not on the coast of Western Australia. Its natural occurrence indicates the reason for the American name "Sea Shore Paspalum." It is, however, sometimes referred to as "Salt Water Couch," but this name is not desirable in Western Australia as salt water couch is the name given to another salt tolerant grass Sporobolus virginicus, which occurs along some of our brackish streams in the agricultural areas. Many farmers have been interested in this grass, too, in recent years for use on salt-affected land.

The recent publicity indicated that Paspalum vaginatum had been brought from South Africa to South Australia where it had shown its salt-tolerance in an area
The grass in Western Australia was brought from the Waite Institute, Adelaide, by Major C. Bleeckmore, who grew it on salt land on his property at Noggerup, and later brought it to the notice of Dr. L. J. H. Teakle because of its successful growth. The material supplied to Dr. Teakle was planted at the Chapman Research Station, north of Geraldton, but it did not make spectacular growth here, probably because summer conditions were too dry.

In 1945, Dr. A. J. Millington co-operated with the author in experiments on a bare salt-affected area at the Avondale Research Station, and he suggested that the *Paspalum vaginatum* from Chapman should be tried at Avondale. It was soon found that, provided there is ample summer moisture, *Paspalum vaginatum* can make vigorous growth, even under salt conditions.

Farmers who wish to obtain small quantities of *Paspalum vaginatum* roots should make application to the Commissioner of Soil Conservation, Department of Agriculture, Perth. However, it may be more convenient to some farmers, and to the Department, if an endeavour were made to secure roots from farmers who have already established it. The following farmers are known to have areas of *Paspalum vaginatum* and I am sure that they would be willing to supply some for trial to other farmers who cared to call at their properties to obtain a few roots.

Avondale Research Station, Beverley.
T. H. A. Taylor—“Walwalling,” West Pingelly.
D. R. Turton—Wandering.
W. Frost—Kendenup.
E. K. Pech—Brookton.
V. G. Mills—Brookton.
T. H. Gibbs—Bulading (west of Darkan).
L. Camerer—Bolgart.
W. G. Spencer—Grass Valley.
M. L. Clarke—“Mumberkine,” Jenna-cubbine.

**RABBIT CONTROL**

Reports from agricultural districts indicate a slackening of breeding activity among rabbits and very few kittens are to be seen. Generally, the overall position is good, although there is an unfortunate tendency on the part of many farmers to ease up on control work, especially in districts where myxomatosis has reduced the rabbit populations to negligible proportions. Warren ripping and poisoning should be intensified in such areas to eradicate the few rabbits which could breed up into plague numbers.

Small active outbreaks of myxomatosis continue to be reported from the agricultural areas in many districts extending from Esperance to Manjimup and as far north as Geraldton. Many of these outbreaks follow the course of the Agriculture Protection Board’s myxomatosis unit.

Two A.P.B. Warren Ripping Units have been fully occupied in the Victoria Plains district endeavouring to complete their contract schedules during January so that they can be moved to the Lower Great Southern areas.

The Board’s poisoning units, using “1080,” recently completed their contracts in the Katanning, Broomehill and Tambellup road board districts and also in the Blackwood and Preston districts.

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