



Department of
Primary Industries and
Regional Development

Journal of the Department of Agriculture, Western Australia, Series 3

Volume 5
Number 4 *July-August, 1956*

Article 7

7-1956

Paspalum grass

C. A. Gardner

H. G. Elliott

Follow this and additional works at: https://library.dpird.wa.gov.au/journal_agriculture3

Recommended Citation

Gardner, C. A. and Elliott, H. G. (1956) "Paspalum grass," *Journal of the Department of Agriculture, Western Australia, Series 3*: Vol. 5: No. 4, Article 7.

Available at: https://library.dpird.wa.gov.au/journal_agriculture3/vol5/iss4/7

This article is brought to you for free and open access by the Agriculture at Digital Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 3 by an authorized administrator of Digital Library. For more information, please contact library@dpird.wa.gov.au.

PASPALUM GRASS

(*Paspalum Dilatatum* Poiret)

By C. A. GARDNER, Government Botanist, and H. G. ELLIOTT, Assistant Superintendent of Dairying

ORIGINALLY native to Uruguay and Argentina, *Paspalum dilatatum* was introduced into the U.S.A. about the middle of the 19th century and is now firmly established and cultivated in the Gulf States where it is known as "Dallis grass" after A. T. Dallis of La Grange, Georgia. It was introduced into Australia by Baron von Mueller about 1880 and since 1898 its cultivation has steadily increased.

Of the six species of *Paspalum* recorded from Western Australia *Paspalum dilatatum* is the one most commonly cultivated. Two of the species are native to this State, the other four being introduced.

The name *Paspalum* is from the Greek *paspalos*—millet; the specific name *dilatatum* refers to the dilated rhachis of the raceme. The plant has many vernacular names such as Paspalum Grass, Large Water Grass, Golden Crown Grass and others.

In the irrigation areas of Western Australia, paspalum is spreading naturally, and many farmers have permanent pastures consisting mainly of this grass, usually in association with legumes such as subterranean, white and strawberry clovers or lotus major, and often with other grasses such as ryegrass and cocksfoot.

BOTANICAL DESCRIPTION

A perennial grass with tufted ascending or erect culms, leafy at the base, 2-5ft. high, glabrous except the inflorescence. Inflorescence consisting of 3-7 spike-like spreading racemes 2-4in. in length, towards the summit of the culm, the spikelets arranged in three or four rows along a flattened rhachis. Spikelets 1-flowered. Lower glume absent. Upper glume ovate-obicular, shortly acute. Three-five nerved, pubescent on the back, the margins ciliate with silky hairs, with the addition of long hairs at the base of the spikelet. Lower

(sterile) lemma like the upper glume in shape and texture, but smaller and usually glabrous, 3-nerved. Fertile lemma shorter than the upper glume and sterile lemma, almost white, crustaceous orbicular, almost flat, with closely inrolled margins embracing the margins of the palea, faintly 3-nerved, almost smooth and shining, but minutely rugose under a lens. The fertile lemma and the tightly embraced palea, enclosing the grain, readily fall from the spikelet, and are together called the "seed" in commercial terminology.

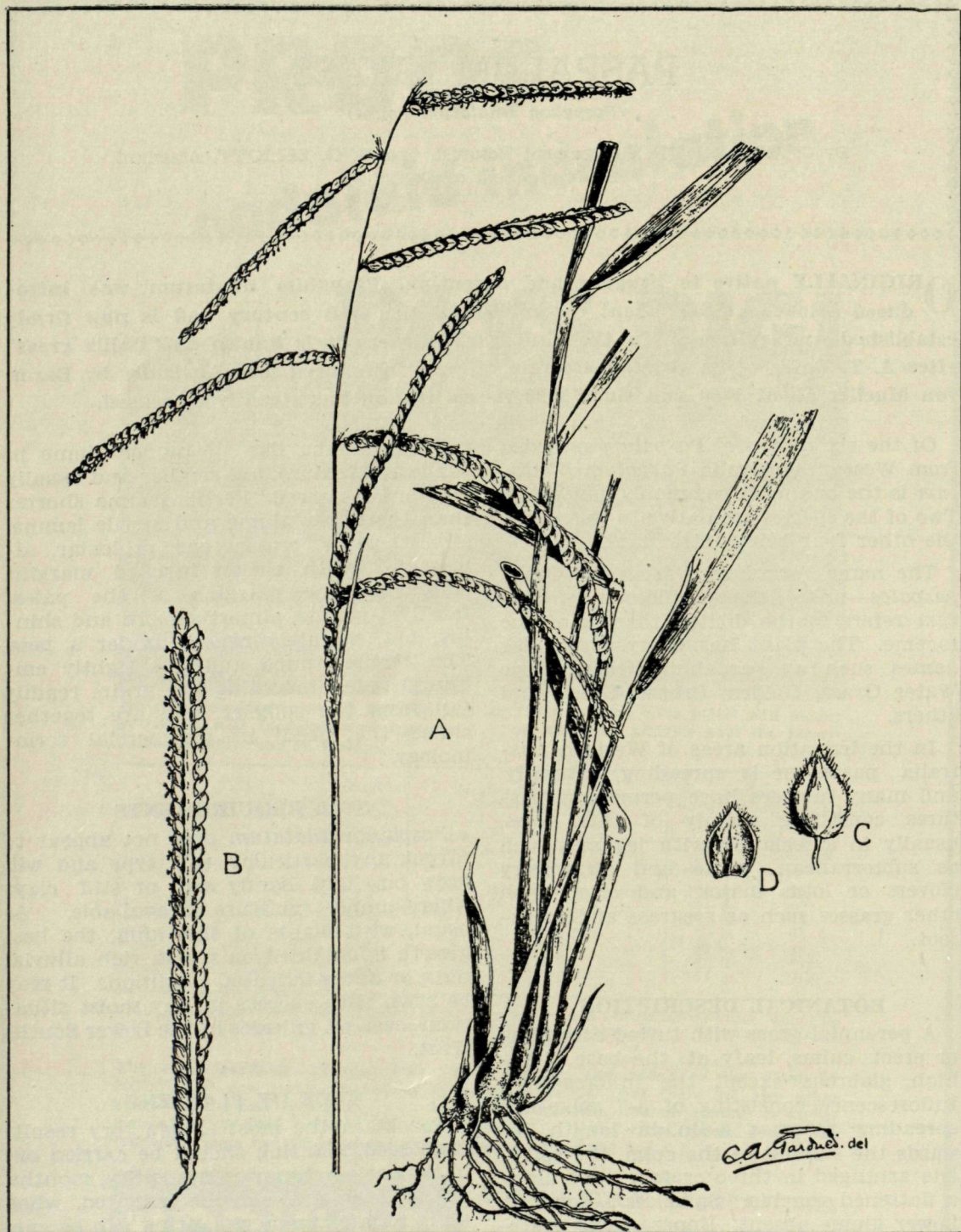
SOIL REQUIREMENTS

Paspalum dilatatum does not appear to favour any particular soil type and will grow on light sandy soil or stiff clays where ample moisture is available. As usual, with plants of this kind, the best growth is obtained on moist, rich alluvial flats, or under irrigated conditions. It may be sown with success in any moist situations, even on hillsides in the Lower South-West.

TIME OF PLANTING

To obtain the most satisfactory results from seed, planting should be carried out in the early autumn or late spring months, unless the land can be irrigated, when early to late summer planting can be carried out.

Germination of the seed is most rapid when the soil temperatures are high and the ground moist. Partial or total failures



PASPALUM GRASS.
Paspalum dilatatum Polret.

A—Portion of plant; B—Spike; C and D—Details of spikelet.



NEW DENNIS 10 h.p. TWIN

AUSTRALIA'S MOST MODERN POWER SAW

MOBILE DRIVEN

Has that power, speed and performance required to carry that 42-inch blade so essential to measure requirements of

TIMBER INDUSTRY :: CONTRACT CLEARING :: FENCING
5 h.p. CIRCULAR Suitable for the farmer

Both have many auxiliary purposes and attachments, including POST-HOLE BORER, POST-HOLE DIGGER and DRAG ATTACHMENT, if necessary

See Demonstrations at Factory,
Maylands

Dennis Power Saws

38 HARDY ROAD, MAYLANDS

Telephones UA 1032, UA 4519

It's FREE

Write now for a coloured brochure on the NEW Dennis Power Saws.

Also gives much valuable information on the handling and maintenance of power saws.

Fill in this coupon.

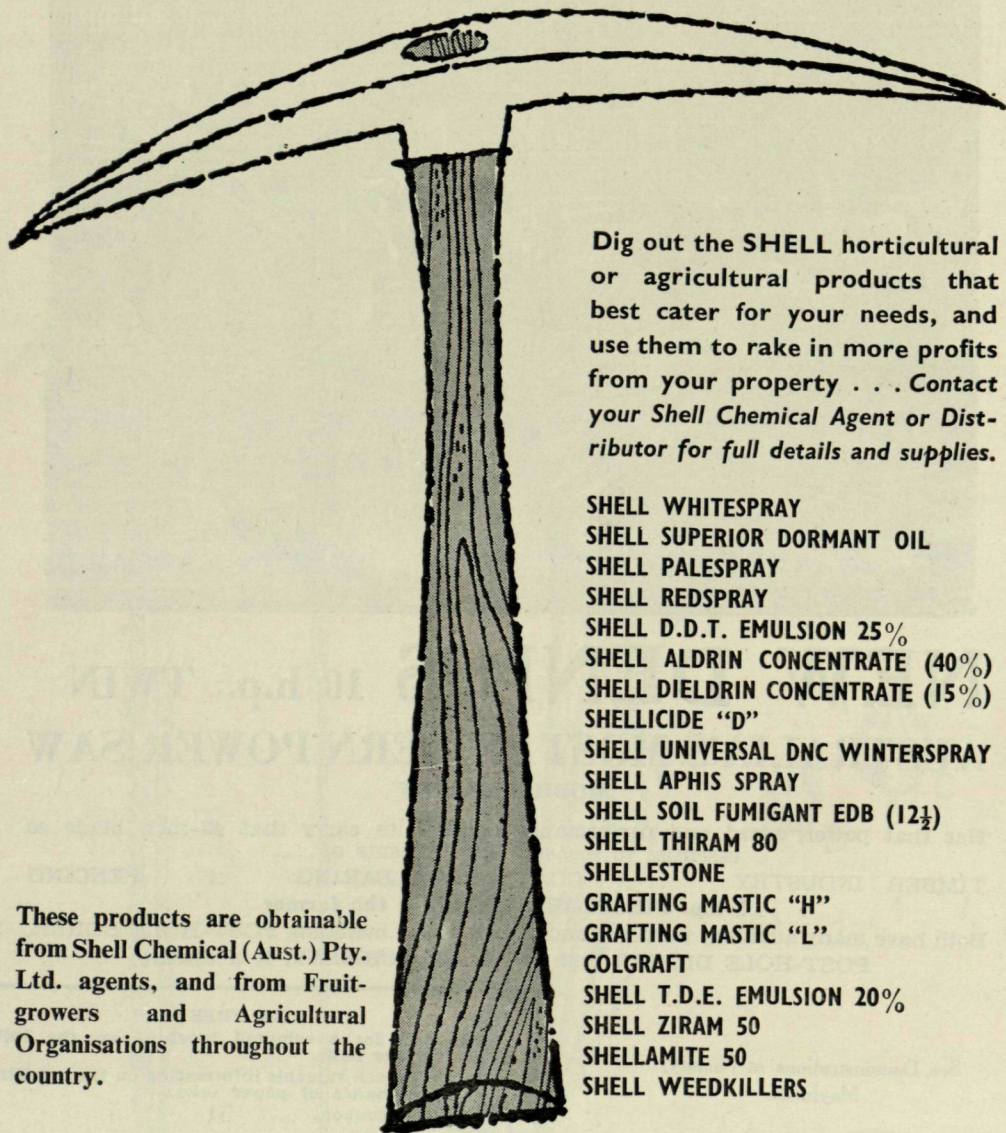
Please send me New Dennis Saw brochure

Name.....

Address.....

J. of A. Jan./Feb.

Take your pick . . .



These products are obtainable from Shell Chemical (Aust.) Pty. Ltd. agents, and from Fruit-growers and Agricultural Organisations throughout the country.

Dig out the SHELL horticultural or agricultural products that best cater for your needs, and use them to rake in more profits from your property . . . Contact your Shell Chemical Agent or Distributor for full details and supplies.

SHELL WHITESPRAY
SHELL SUPERIOR DORMANT OIL
SHELL PALESPRAY
SHELL REDSPRAY
SHELL D.D.T. EMULSION 25%
SHELL ALDRIN CONCENTRATE (40%)
SHELL DIELDRIN CONCENTRATE (15%)
SHELICIDE "D"
SHELL UNIVERSAL DNC WINTERSPRAY
SHELL APHIS SPRAY
SHELL SOIL FUMIGANT EDB (12½)
SHELL THIRAM 80
SHELLESTONE
GRAFTING MASTIC "H"
GRAFTING MASTIC "L"
COLGRAFT
SHELL T.D.E. EMULSION 20%
SHELL ZIRAM 50
SHELLAMITE 50
SHELL WEEDKILLERS

Shell Chemical

(Australia) Pty. Ltd. (Inc. in Victoria)
Melbourne - Sydney - Brisbane - Perth - Adelaide - Hobart

SC256E

often occur if planting is carried out in the early winter months when the land is cold and wet.

METHOD OF PLANTING

The ground should be well worked and have a fine seed bed. The seed is sown at the rate of 10 to 12 lb. to the acre when sown alone, but it is usually sown at 4 lb. to 8 lb. to the acre with white clover (2 lb.) strawberry clover ($\frac{1}{2}$ to $1\frac{1}{2}$ lb.), subterranean clover (4 lb.) or ryegrass (4 lb.).

Superphosphate at the rate of 2 cwts. per acre is recommended, but under irrigated conditions, up to 4 cwts. per acre can be used to advantage.

After sowing, the seed should be lightly covered with soil by using a T-Bar roller, bush or light harrows. Deep planting must be avoided at all times.

AFTER-CARE

Paspalum makes vigorous growth from October to May inclusive and under ideal conditions the most rapid growth occurs during January, February and March. It has a tendency to run to seed rapidly during these hot months however and should be grazed heavily and mown to prevent the seed stems from forming.

To prevent the grass from becoming sod-bound, it is necessary to apply a system of efficient renovation so that clovers and other grasses can grow in association with it. Normally, this renovation should be done in the autumn and two to three years after establishment.

On old sod-bound paspalum swards, complete breaking-up and working down of the area is recommended. After a good tilth is produced, the area should be re-seeded with perennial ryegrass at 4 lb. to the acre and white clover at 2 lb., or mid-season subterranean clover at 4 lb., per acre. Under irrigated conditions a mixture of perennial ryegrass (6 lb.), cocksfoot (4 lb.), white clover (2 lb.), and strawberry clover ($\frac{1}{2}$ lb.) is recommended.

ERGOT

For many years, paspalum in this State has been seriously affected with ergot

(*Claviceps paspali*), a fungus which attacks the seeds and which may produce poisoning.

The presence of ergot is noticed when the seed-heads form, as affected seed-heads become sticky.

To control the disease and guard against stock poisoning, seeding should be prevented by mowing or grazing heavily during the hot summer months.

SEED

Paspalum normally produces seed freely, but as the seed ripens from the tip of the head downward and shatters off as soon as it is ripe, good germinable seed can only be gathered by hand. During recent years, the quality of seed available has been particularly good and the percentage of germination has been highly satisfactory. The number of seeds per lb. is estimated at 320,000 with a bushel weight of 20 lb.

FEEDING QUALITY

Practically all classes of livestock will appreciate paspalum when it is young and vigorous, and it remains succulent and nutritious when managed and grazed efficiently.

When not grazed adequately in the early summer, it runs to seed and the stalks become fibrous and tough.

EFFECT OF FROSTS

Paspalum is a heat-loving grass and is susceptible to frosts. Even light frost will cause it to turn brown, but with the advent of warmer weather in the spring, it will resume growth and produce a large bulk of good feed, provided that ample moisture is available.

PROS AND CONS

From the foregoing, it will be seen that paspalum has definite advantages as well as certain disadvantages and these have been summarised below.

Advantages.

- (1) It is a perennial grass which makes vigorous summer growth.

- (2) It thrives on moist soils but is highly drought-resistant.
- (3) It will stand heavy grazing by stock.
- (4) It gives green feed in the spring, summer and autumn months.
- (5) Seed will remain dormant in the ground for months until conditions are favourable for germination.

Disadvantages.

- (1) It is susceptible to ergot.
- (2) It is not palatable when allowed to become rank or old.
- (3) It may become troublesome under irrigated conditions if not well managed and controlled.
- (4) It will not stand severe frosts.
- (5) The seed matures unevenly causing low germination rates.



Book Review.

TEXTBOOK OF MEAT INSPECTION

ALTHOUGH Australian flocks and herds have been kept free from many of the diseases which are endemic in older countries, the importance of an efficient meat inspection service cannot be over-emphasised. Our per capita consumption of meat and meat products has always been high and in view of the close relationship between animal health and public health it is essential that our meat inspection standards should be maintained at a high level.

In 1936, Mr. J. Drabble, B.V.Sc., published a textbook on meat inspection which has become a standard work on this subject. The fact that it has recently achieved its sixth edition is evidence that it has met the need for an authoritative textbook on meat inspection suited to Australian conditions.

As a lecturer, demonstrator and co-examiner in meat inspection at the Veterinary School of the University of Sydney and as a former Officer-in-Charge of Meat Inspection at the N.S.W. State Abattoirs, Mr. Drabble is well qualified to write on this important subject.

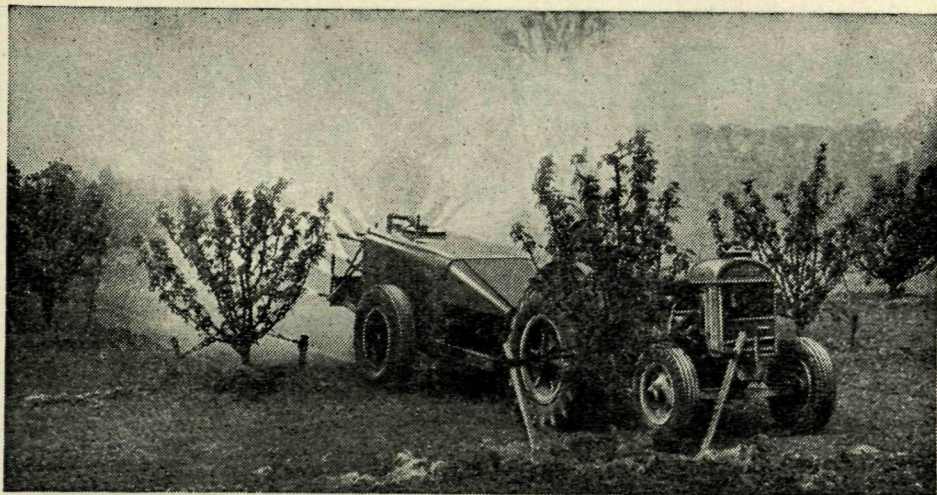
His book is based on the course of lectures given by the author at the Sydney Technical College and consists of a section dealing with elementary anatomy and

physiology followed by chapters on slaughtering and dressing methods; a history of meat inspection; notes on the preservation of meat and lengthy and well-illustrated chapters on the various diseases of livestock.

Glossaries of trade and technical terms and a comprehensive index add to the value of the book as a work of reference.

It is a book that will be especially valuable to the student of meat inspection methods and one that will interest many stock-owners. It contains 110 excellent illustrations, and 414 pages of well-presented information.

"Textbook of Meat Inspection" is by J. Drabble and is published by Angus & Robertson. Price £4 4s.—J.M.



**Get better protection against
insect pests with**

MALATHION*

* O, O — dimethyl dithiophosphate of diethyl mercaptosuccinate.

Tests in many parts of the world show the superiority
of MALATHION over other insecticides in use.

It acts rapidly — is economical to use.

Residues on crops disappear quickly.

It has a wide margin of safety to user.

It kills insects resistant to other insecticides.

MALATHION kills flies too !

British-made MALATHION is now available in insecticide
preparations from your local supplier.

Use MALATHION to control insects—including flies—for :

**FRUIT · VEGETABLES · FIELD CROPS
FLOWERS · ORNAMENTALS · FARM BUILDINGS
ANIMAL HOUSES · RUBBISH TIPS
AROUND WATER TROUGHS.**

CYANAMID PRODUCTS LTD.

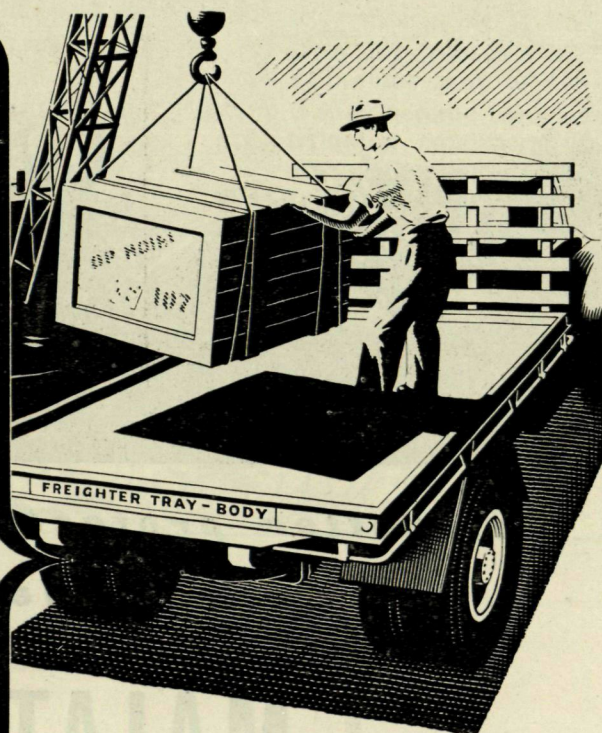
AGRICULTURAL CHEMICALS DEPARTMENT,

BUSH HOUSE · ALDWYCH · LONDON · W.C.2.

**AGENTS: Titan Pty. (Cyanamid Division) at 59, Halstead
Street, HURSTVILLE, New South Wales, or G. B.
O'Malley, 377, Little Collins Street, MELBOURNE.**

Please mention the "Journal of Agriculture, W.A." when writing to our advertisers

**Body
built
with a
strong
rolled
steel
frame
for
less
wear
and
longer
life**



Steel outlives wood—and when it is steel in a TRAY BODY, that means extra profits to the operator, profits that keep rolling in long after a wood frame is on the junk heap. The electrically-welded, all-steel frame in a FREIGHTER Tray Body is built of rolled steel sections throughout for greater strength and longer life. No maintenance required. The flooring is of highest grade hardwood and every model has sturdy pipe rope rails fitted below the coaming. The range includes a size ready-made for your job—and an attachment can be fitted to enable you to hitch a FREIGHTER 4-wheel trailer to any model for double-load shifting. Come in and select yours right away.



**ALL-STEEL
FRAME**

FREIGHTER TRAY BODY

FREIGHTERS build them better to last longer !

Please forward details of Freighter Tray Body

Name

Address

FTY510-24

FREIGHTERS SALES & SERVICE

(Division of Trailer Sales & Service (W.A.) Pty. Ltd.)

160 Albany Highway, Victoria Park, W.A.

Phone: M 2141 - M 2298

Also at Brisbane, Sydney, Melbourne, Adelaide, Launceston

SEE YOUR NEAREST AUTHORISED FREIGHTER DEALER