HoVU AU Clipper **Cultivar Source: Waite Agricultural Research Institute, Glen Osmond (South Australia) AU CID:201162 SID:0**

S R Walsh. Clipper, the new malting barley. *Queensland Agricultural J.* 97 (2): 91-92 (1971)

Clipper, The New Malting Barley

DURING the past few years, the Department of Primary Industries, in association with the Barley Marketing Board and individual growers, has tested new barley varieties introduced from southern States.

by S. R. Walsh, Agriculture Branch.

Over a range of climatic and soil conditions, Clipper has consistently given high yields of grain of acceptable malting quality.

In 1968, one bag of Clipper seed received by the Barley Marketing Board was grown under irrigation on a farm in the Brookstead area; 300 bags of seed were harvested from this planting.

Seed stocks were further increased in 1969 so that 60,000 bags of Clipper seed were available from the Board for distribution to barley growers in the 1970 season.

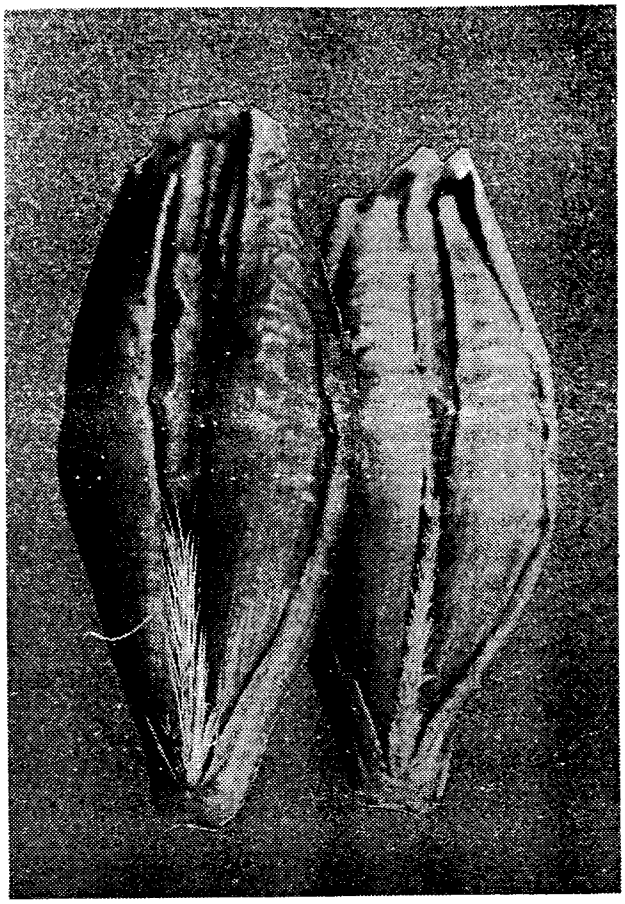
Clipper has an erect habit of growth with a firm, bright-coloured, strong straw. It is less subject to lodging than Prior and also appears less susceptible to powdery mildew.

In maturity, Clipper flowers 3 to 5 days earlier than Prior. The leaves are narrow and the head is medium dense (similar in appearance to Prior) and semi-erect during the growing period. Because of this semi-erect characteristic of the head, it is less susceptible to wind damage than Prior.

The grain is white although there is some purple (anthocyanin) colouring in the heads during ripening. The grain is often slightly smaller than that of Prior but can be positively identified from it by the presence of long rachilla hairs.

Clipper was selected from the cross Prior x Proctor made at the Waite Agricultural Research Institute in South Australia. It was designated WI 2095/10 before its release and had been tested under that identification number in trials in Queensland.

Clipper has been tested over a wide range of environments both rain-grown and irrigated.



Grains of the Clipper (left) and Prior varieties. Note the long rachilla hairs on Clipper compared with the short hairs on the rachilla of Prior.

Results of some of the Department of Primary Industries rain-grown trials are given in the following table. Yields are shown as bushels per acre.

Tara, Goondiwindi and Biloela are not regarded as districts suitable for the production of barley of malting quality, they are included

	1968		1969	
	Clipper	Prior	Clipper	Prior
Dalby	66·6	48·6	NH*	NH
Tara	70·3	54·0	38·5	35·5
Goondiwindi ..	48·0	35·4	23·5	30·2
Warwick ..	61·4	40·2	55·1	53·0
Millmerran ..	61·0	51·0	..	..
Brookstead ..	61·1	36·8	Frosted	Frosted
Bowenville ..	36·8	32·1	..	..
Biloela	56·5	44·8	NH	NH
Boonah ..	70·0	77·0	NH	NH
Junabee ..	62·6	60·6	33·9	33·4

* Not harvested.

in the testing programme to widen the range of environmental conditions.

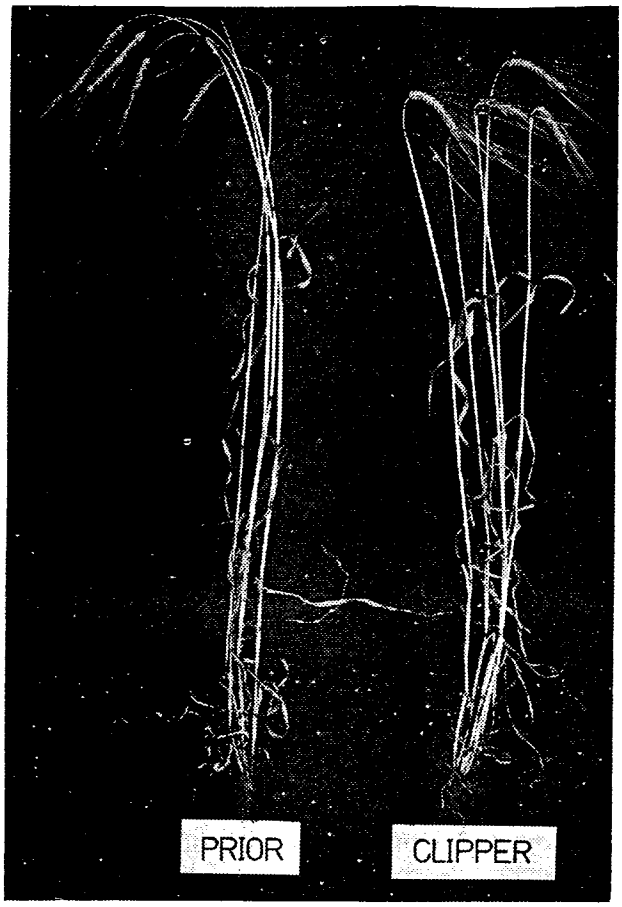
Clipper is now recommended as a replacement for Prior. The Barley Marketing Board anticipates a complete change from Prior to Clipper in two seasons. It is widely adaptable and recommended particularly for the traditional malting barley growing districts. Under conditions in these areas, Clipper can be expected to yield 20 per cent. more than Prior and has the additional advantage of being reasonably resistant to lodging.

Clipper showed superior malting quality to Prior with an overall 3·4 per cent. increase in malt extract. This analysis was carried out by the Queensland Wheat Research Institute on barley from seven trials in the 1968-69 season. All analyses were carried out without bromate or gibberellic acid.

Results from the analyses of these trials are shown in the following table.

Site	1,000-grain weight gm		Malt Extract %	
	Prior	Clipper	Prior	Clipper
Bowenville ..	35·4	37·9	71·5	74·7
Brookstead ..	33·4	36·7	67·8	71·0
Millmerran ..	33·1	36·1	68·2	71·5
St. George ..	40·0	41·2	63·4	70·4
Boonah ..	41·5	41·4	71·7	72·3
Beaudesert ..	39·7	42·7	69·6	71·4
Inglewood ..	37·7	39 4	66·6	71·3
Mean ..	37·3	39·3	68·4	71·8

During the malting process even germination of the grain is essential. It is therefore most important that grain of the varieties Clipper and Prior should not be mixed. The varieties



Mature heads of Prior and Clipper. The characteristic hook in the upper stem and head of Clipper can be compared with the longer curve in Prior.

are not compatible in the malting process for two very good reasons. First, after harvest, Clipper has a shorter period of dormancy before it will germinate than Prior. Second, when subjected to the malting process, Clipper germinates more rapidly than Prior.

With the introduction of Clipper, no alteration has been made to grain moisture limitations of the classifications. The Board will accept barley in bulk at 12½ per cent. moisture or bagged grain at 13½ per cent. moisture.

In addition, the three main classifications remain as "malting," "milling" and "feed". For the acceptance of a crop as "selected seed" an application has to be lodged with the Barley Marketing Board before August 31 each year.