Crop variety recommendations [1980/81 season]

Department of Agriculture, Western Australia
Crop variety recommendations

Crop varieties recommended by the Department of Agriculture for 1980/81 are summarised in Figures 1 and 2. Recommendations are considered by the State Wheat Advisory Committee and the State Coarse Grains and Seeds Advisory Committee, both of which comprise representatives of the Department of Agriculture, grain handling and selling authorities, processing industries, and farmers. Chairman of both committees is Mr T.E. McDowell, of the Department of Agriculture.

Wheat variety recommendations for next season involve the full implications of the wheat varietal control scheme to be implemented by the Australian Wheat Board in the 1980/81 season.

The recommendations have been carefully considered in this context, and it has been agreed that no wheat variety will be recommended for any area where it is subject to discount because of quality disabilities. Growers should note varieties to be discounted in the 1980/81 season and the varieties recommended so they can arrange seed supplies accordingly. Varieties subject to discount can be checked with the Australian Wheat Board, Co-operative Bulk Handling Ltd, or Department of Agriculture.

Recommendations are given according to areas and grades. For many areas, separate variety recommendations are given for various situations (sowing time, soil types, disease liability). The main grade in W.A. is Australian Standard White WA (ASW) which is received at most sidings. Australian Hard WA (A. Hard) and Australian Soft WA (A. Soft) are produced in specific areas and are received only at sidings nominated each year by Co-operative Bulk Handling Ltd.

Figure 1 shows the areas referred to in Table 1, which gives full details of the recommendations. Table 2 lists acceptable alternative varieties.

Miling, the new locally-bred wheat variety released in 1979, is recommended for the production of both Australian Standard White and Australian Hard grade over major central and western wheat growing areas where it should replace Gamenya and other varieties.

It is also recommended as a support variety in some north eastern areas as well as medium rainfall areas east of the Great Southern railway.

Miling has shown up well in Department of Agriculture variety trials over a wide area, particularly medium and higher rainfall areas. It is classed as a hard wheat, but is considered suitable for both ASW and Australian Hard grades.

It is superior to Gamenya and Madden in hectolitre weight and milling yield. The grain is slightly smaller than Gamenya, but no problems are expected unless seasonal conditions are particularly adverse. Miling should replace Gamenya in much of the central wheatbelt areas, particularly for May and early June sowing on lighter soils, where is does best. It should also replace Darkan in the West Midland area. However Miling is not a wheat which is expected to tolerate seasons with a late start and dry finish.

Halberd and Bokal are other wheat varieties which feature in changes to recommendations in eastern and northern areas. Halberd has been subject to considerable debate in view of quality disabilities which detract from its milling characteristics and overall potential as a high yielder in many areas. The State Wheat Advisory Committee concluded that Halberd is useful in Western Australia as long as it replaces varieties of poorer quality such as Insignia and Heron, and does not itself reach a level which would begin to reduce the overall quality of wheat in any individual port zone. It has been accepted in the varietal control scheme on this basis.

The main area in which Halberd is recommended is the south central wheatbelt between the No. 1 and No. 2 rabbit proof fences where it has a substantial yield advantage.
The northern area lies generally north of a line through Eneabba, Carnamah and Caron. In this area, use of rust resistant varieties depends on the risk of rust and this risk is increased if rust can be found on green plants in late summer or early autumn. Available rust resistant varieties are mostly lower yielding than susceptible varieties in the absence of rust. In years of low risk, the main sowing can be susceptible varieties, but sowing some resistant varieties is recommended to provide future supplies of seed if required.

For the high and low rainfall areas (1a and 1c) in years of low rust risk, Darkan* (ASW) is recommended for sowing before May 15, and Gamenya (ASW/A.Hard) for sowing after May 15.

For medium rainfall areas serviced by sidings receiving A. Hard grade (1b), Bokal is recommended for all sowings. It is slightly lower than Gamenya in hectolitre weight.

For other medium rainfall areas, Halberd* (ASW) is recommended for sowing before May 15, and Gamenya (ASW) for sowing after May 15.

Rust resistant reserves for all areas are Warimba (ASW/A.Hard) – early sown; and Madden (ASW/A.Hard) – later sown. When there is a high risk of rust, recommendations for the whole northern area are for general sowing (May/June) – Madden (ASW/A.Hard), with reserve areas of Warimba (ASW/A.Hard).

Area 2, the central north central, high and medium rainfall area, covers the western high rainfall area (over 450mm) from Eneabba to Brookton and the medium rainfall area (325mm to 450mm) from Carnamah to Corinigan. The latter is a major wheat growing area producing mainly ASW with some hard grade to the east and north.

Miling (ASW/A.Hard) is recommended for all sowings (May and June) in this area. However, it may not be as suitable as Darkan* for early May sowing in the West Midland area.

The north central, low rainfall area is generally an area which receives less than 325mm rainfall. It produces mainly ASW wheat, but is a major area for production of hard grade wheat.

For light soils (sandy or gravelly), Miling (ASW/A.Hard) is recommended for sowing in May, and Gamenya (ASW/A.Hard) for sowing from June 1.

For heavy soils (clays or clay-loams), Halberd** (ASW) is recommended for sowing in May; Gamenya (ASW/A.Hard) for sowing from May 15 to 31; and Madden (ASW/A.Hard) for sowing from June 1.

The central, low rainfall area is generally an area which receives less than 325mm rainfall. It produces mainly ASW wheat, but is a major area for production of hard grade wheat.

For light soils (sandy or gravelly), Halberd** (ASW) is recommended for sowing before May 15, and Gamenya (ASW/A.Hard) for sowing from May 15.

For heavy soils (clays or clay-loams), recommendations are Halberd** (ASW) for sowing in May; Gamenya (ASW/A.Hard) for sowing from May 15 to 31; and Madden (ASW/A.Hard) for sowing from June 1.

The east Great Southern is generally the area between the Great Southern railway and the No. 2 rabbit proof fence, extending from Corinigan to Nyabing. It produces lower protein wheat and is the main area for producing the A. Soft grade. Special receival facilities for A. Soft grade are provided at sidings nominated by Co-operative Bulk Handling Ltd.

Tincurrin (A. Soft only) is recommended for all sowings in all areas serviced by Aust. Soft sidings, including Corinigan. For all sowings elsewhere in this area, Miling (ASW) is recommended.

The west Great Southern is generally the area west of the Great Southern railway, from Brookton to Albany, with over 450mm of rainfall. The area produces low protein wheat and is suitable for production of soft wheat. Egret* (ASW) is recommended for all sowings.

The lower east Great Southern is similar to area 6, but forms part of a south coastal strip which is considered rust liable. It lies east of the lower Great Southern railway, within the area Katanning-Pingrup-Ongerup-Albany. Rust resistant varieties are recommended particularly in years when there is a high risk of rust (see notes for area 1).

For the areas serviced by Aust. soft sidings, in years of low rust risk – Tincurrin (A. Soft only) or Egret* (ASW where received); for years of high rust risk – Egret* (ASW).

For all other areas, only rust resistant varieties are recommended. For the main sowing – May/June, Egret* (ASW) is recommended; the reserve variety – May sowing, is Warimba (ASW). Note that Egret is resistant to the major rust strains in W.A. but is susceptible to strains found elsewhere. The attacking strains have been found in W.A. but have not built up. Reserve varieties are resistant to all strains.

Area 8 (south central, east of No. 2 rabbit proof fence) extends generally east from the No. 2 rabbit proof fence (Corinigan to Nyabing) to the margin of the wheat area east of the No. 1 rabbit proof fence. It is a major wheat area, producing ASW grade delivered to the Bunbury, Albany and Esperance ports.

For medium rainfall parts of this area (over 325mm) Halberd** (ASW) or Miling (ASW) are recommended for all sowings. Miling is of acceptable quality, but lower in yield than Halberd; Halberd may be discounted in future if the level of production in the area causes quality problems.

For parts of the area of below 325mm rainfall, Halberd** (ASW) or Gamenya (ASW) is recommended for all sowings. Again, Gamenya is lower yielding, but of acceptable quality; Halberd may be discounted in future if the level of production in the area causes quality problems.
Area 9 (south coastal, below 350mm, rust liable) has recommendations restricted to the rust resistant varieties, to lessen the risk of crop loss and build up of rust epidemics. The area is generally north of a line from Grass Patch to Pingrup, and south of a line from Pingrup-Mt Madden-Kumari.

For May sowing, Warimba (ASW) is recommended, with Madden for June sowing or as the reserve variety.

For area 10 (south coastal, above 350mm, rust liable), Egret* (ASW) is recommended for all sowings, with a reserve variety – May sowing, of Warimba (ASW). Egret is resistant to major rust strains present in W.A. but is susceptible to strains found elsewhere. The attacking strains have been found in W.A. but have not built up. Reserve varieties are resistant to all strains.

Varieties may be subject to some restriction, but are acceptable at present without discount into ASW.

The above note also applies to Halberd. It may be discounted in future if the level of production in the area causes quality problems. A balance of production with other varieties is desirable.
It is stressed that undue changeover to Halberd in any area could lead to a discount according to the quality problem created. For this reason additional better quality varieties have been recommended for all areas. Growers should balance their sowings of Halberd and other varieties to achieve the maximum long term benefit. This applies particularly in the south central area where the area grown to Halberd is already significant.

The older variety Bokal has been brought into the recommendations for northern medium rainfall areas because more detailed assessment of trial results indicates that yield averages 4 per cent more than Gamanya in that area.

Bokal is a good quality hard wheat, but hectolitre weight is generally lower than Gamanya and this is the main reason for restricting its application. This problem appears less serious in northern areas, and northern growers could benefit by growing the variety specifically where it could be delivered as Australian Hard grade.

In central eastern areas the high yield of Bokal (6 per cent above Gamanya on average) is offset by substantially lower hectolitre weight. While Bokal is not recommended for this area it is listed as an alternative variety for growers prepared to accept the risk of discount on low hectolitre weight.

Coarse grain, legumes and oilseeds
Recommendations on varieties of coarse grains, grain legume and oilseed crops for the 1980/81 season feature the new lupin, Illyarrie, and the new rapsessed, Wesway, both of which were released to growers in 1979. The maps show the areas for the major recommended varieties of each crop.

Barley
- Clipper is recommended for all areas for producing two-row manufacturing and feed grades of barley.
- Alternative acceptable varieties are Dampier for two-row manufacturing and feed and Beecher for six-row feed.

Dampier is lower yielding than Clipper in most areas and is not sought for overseas markets although it is a substantial part of local demand. Dampier is suitable for later sowing in southern high rainfall areas and where severe head loss is experienced with Clipper, such as where harvesting is delayed. Dampier may lodge under adverse conditions.

<table>
<thead>
<tr>
<th>Acceptable alternatives to recommended wheat varieties – 1980/81 season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

*Varieties may be subject to some restriction in the future but are acceptable at present, without discount into ASW.

<table>
<thead>
<tr>
<th>Acceptable alternatives to recommended wheat varieties – 1980/81 season</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

*Varieties may be subject to some restriction in the future but are acceptable at present, without discount into ASW.

Coarse grain, legumes and oilseeds
Recommendations on varieties of coarse grains, grain legume and oilseed crops for the 1980/81 season feature the new lupin, Illyarrie, and the new rapsessed, Wesway, both of which were released to growers in 1979. The maps show the areas for the major recommended varieties of each crop.

Barley
- Clipper is recommended for all areas for producing two-row manufacturing and feed grades of barley.
- Alternative acceptable varieties are Dampier for two-row manufacturing and feed and Beecher for six-row feed.

Dampier is lower yielding than Clipper in most areas and is not sought for overseas markets although it is a substantial part of local demand. Dampier is suitable for later sowing in southern high rainfall areas and where severe head loss is experienced with Clipper, such as where harvesting is delayed. Dampier may lodge under adverse conditions.
Beecher yields more than Clipper and Dampier in some drier areas and although demand is low, it may be more economic to produce than two-row depending on relative prices. Beecher is suitable for "morrel" and similar alkaline soils.

Although Lara outyields Clipper and Dampier in southern high rainfall areas, it is a small grain variety and in some circumstances the grain will not be sufficiently large to be accepted as feed grade. It is not recommended because of its small grain.

Oats

- Moore is recommended for the West Midlands and the West Great Southern area as far south as Katanning.
- West is recommended for all other areas.

West is an acceptable alternative to Moore. Another acceptable variety in all areas is Swan which mostly yields less than Moore and West. It has a lower groat percentage and grain protein than West. Irwin is an additional alternative for late sowing in northern medium and low rainfall areas.

All varieties are susceptible to current strains of oat rust in Western Australia.

Lupins

Lupins are unlikely to succeed where average annual rainfall is below 350 mm, except with very early sowing on light sandy or gravelly soils.

- Illyarrie (narrow-leaved lupin) is recommended for general sowing on sandy and/or gravelly soils in all areas. It is resistant to grey leaf spot.
- Marri (narrow leaved lupin) is recommended as a taller but lower yielding variety than Illyarrie, for early sowing on deep sandy soils in northern higher rainfall areas (over 450 mm). It also is resistant to grey leaf spot.
- Ultra (white lupin) is recommended for sowing on red-brown loamy soils and other heavy soils in all areas. The variety is noted for its large, high protein seeds.

An alternative to Illyarrie is Unicrop which is appreciably lower yielding in most areas (up to 50 per cent in some northern areas), is slightly shorter, and is susceptible to grey leaf spot. The alternative to Ultra on the heavier soils is Illyarrie.

All lupin varieties present a risk of lupinosis in sheep grazing the stubble and appropriate precautions are necessary to avoid stock losses. The risk with the new variety Illyarrie is possibly slightly higher than with other narrow leafed lupin varieties while the white lupin, Ultra, presents less risk.

Field peas

Derrimut is the recommended brown seeded variety, for all areas. It generally outyields white seeded varieties in grain.

Buckley is the recommended white seeded variety for general sowing. White Brunswick (white seeded) is recommended for later sowing in areas of below 350 mm rainfall.

Linseed

- Glenelg is recommended for all recognised linseed growing areas. In general, these are southern areas with over 450 mm of rainfall, but good yields may be obtained in other areas with more than 325 mm if weeds and insects are controlled.

Rapeseed

Rapeseed growing is likely to be successful only in areas receiving over 450 mm average annual rainfall, particularly with May sowing in the longer season south coastal areas.

- Wesway is recommended for the main May-June sowing in southern and south central high rainfall areas and sowing only in May in central and north central (West Midland) high rainfall areas.
- Wesreo, is recommended only for very early sowing in early May in wetter areas with over 500 mm average annual rainfall.