

HAY QUALITY

Koorabup has improved digestibility, lower WSC, similar ADF and slightly higher NDF compared to Carrolup (Table 3). Management practices to maximize hay quality should be used for this variety. More information is available in the book "Growing Quality Oat Hay" which can be downloaded for free from the AEXCO website www.aexco.com.au

TABLE 3

Average dry matter digestibility, water soluble carbohydrate (WSC), neutral detergent fibre (NDF) and crude protein for Koorabup hay compared to six varieties averaged across trials conducted in SA, VIC, NSW and WA, 2014-2018. Analysis by Chris Lisle, Bioinformatics and Biometrics for the Australian Grains Industry (BBAGI).

	Digestibility %dmd	WSC %dm	ADF %dm	NDF %dm	Crude protein %dm
Koorabup	63.9	24.7	30.0	53.1	7.6
Brusher	65.1	26.7	29.0	51.4	7.4
Carrolup	63.4	25.7	29.7	51.7	7.6
Durack	63.2	24.8	29.7	52.2	7.7
Mulgara	65.3	26.4	29.3	51.6	7.6
Wintaroo	64.5	25.0	29.8	52.7	7.3
Yallara	65.0	27.1	28.9	50.4	7.5
No. sites	35	36	36	37	34

SOWING

Sowing rates should achieve a minimum plant density of 180 to 200 plants per m². Amount of grain sown should relate to seedbed conditions, germination percent and grain weight which for Koorabup is similar to Brusher and Durack.



KOORABUP^{1b}

A new early-midseason hay oat with improved septoria resistance

SUMMARY

Koorabup (tested as 05096-32) is a new high yielding hay oat variety developed for WA with a similar height and similar or slightly later hay cutting time than Carrolup.

Koorabup has the best septoria resistance of any current hay variety.

Hay and grain yields are similar to Carrolup.

Hay colour is excellent with improved digestibility compared to Carrolup.

Koorabup has improved foliar disease resistance and grain quality compared to other current hay varieties and combines improved septoria resistance with good rust and bacterial blight resistances.

Koorabup has better grain quality than Carrolup, low screenings and bright grain.

Koorabup has better lodging and shattering resistance than Wintaroo and Brusher and is similar to Mulgara.

COMPILED BY

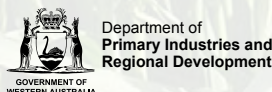
Sue Hoppo, Michelle Williams and Pamela Zwer, National Oat Breeding Program, SARDI.

INFORMATION PROVIDED BY

National Oat Breeding Program SA and WA nodes.

SEED AVAILABILITY

AEXCO Pty Ltd have the marketing rights to Koorabup. For more information on seed availability and suppliers go to www.aexco.com.au



BREEDING

Koorabup was developed by the National Oat Breeding Program and collaborators. Koorabup was selected from the cross WAOAT2282/WAOAT2236.

The name, Koorabup, was selected from the Western Australian Rivers series as with other varieties previously released using WA material.

COMMERCIALISATION

Koorabup is protected by Plant Breeders Rights and is marketed exclusively by Australian Exporters Company Pty Ltd (AEXCO).

HAY AND GRAIN YIELD

Koorabup is similar for hay production compared to Carrolup (Table 1). Koorabup's grain yield is similar to Carrolup, Durack and Yallara in all states and an improvement compared to other hay varieties (Table 2).

TABLE 1

Average hay yields of Koorabup from 2014 to 2018, compared to six hay oat varieties as t/ha in four states. Data courtesy Chris Lisle, Bioinformatics and Biometrics for the Australian Grains Industry (BBAGI).

VARIETY	HAY YIELD (T/HA)			
	NSW	SA	VIC	WA
Koorabup	8.5	11.3	8.1	6.7
Brusher	8.9	12.0	8.3	7.3
Carrolup	9.1	11.4	8.5	6.6
Durack	9.0	11.7	7.7	6.2
Mulgara	8.9	11.8	8.3	6.9
Wintaroo	9.2	12.3	8.8	7.5
Yallara	9.1	12.4	8.5	7.1
No. sites	4	12	9	11

TABLE 2

Average grain yields of Koorabup from 2014 to 2018, compared to six hay oat varieties as t/ha in four states. Data courtesy Chris Lisle, Bioinformatics and Biometrics for the Australian Grains Industry (BBAGI).

VARIETY	GRAIN YIELD (T/HA)			
	NSW	SA	VIC	WA
Koorabup	3.3	3.1	3.5	3.4
Brusher	2.9	2.7	2.9	2.7
Carrolup	3.4	3.3	3.7	3.4
Durack	3.5	3.4	3.6	3.3
Mulgara	3.2	3.0	3.4	3.2
Wintaroo	3.2	2.9	3.3	3.2
Yallara	3.4	3.2	3.6	3.4
No. sites	42	42	32	69

GRAIN QUALITY

Grain quality for Koorabup is similar to the milling variety Yallara but with a lower groat percent (data not presented). Koorabup has improved grain quality compared to Carrolup with higher hectolitre weight and lower screenings. Koorabup has low oil and bright grain. It has high hull lignin.

PLANT CHARACTERISTICS

Koorabup has a mid tall stature and is similar in height to Carrolup. Koorabup has excellent hay colour at hay cutting. Stem diameter is similar to other varieties.

Management at grain harvest is important for tall varieties which can be more susceptible to lodging and shattering than dwarf varieties depending on the conditions. Koorabup is moderately resistant to lodging and moderately susceptible to shattering and similar to Mulgara. It is better than Wintaroo and Brusher. Lodging is similar to Carrolup but more shattering susceptible.

Koorabup heads at a similar time to Carrolup, Brusher and Yallara but matures slightly later. Days to cutting can vary depending on seasonal conditions at hay cutting (data not presented).

DISEASE RESISTANCE

Koorabup combines improved septoria resistance with good bacterial blight and leaf rust resistances. It is not recommended for areas where CCN or stem nematode could be a problem.

Cereal cyst nematode	Moderately susceptible	Not recommended for areas where CCN is a problem
Stem nematode	Moderately intolerant	Not recommended for areas where SN is a problem
Septoria in South Australia	Moderately resistant	Better than Durack, Brusher, Mulgara, Wintaroo and Yallara
Septoria in Western Australia	Moderately resistant to moderately susceptible	Better than Brusher, Carrolup, Durack, Mulgara, Wintaroo and Yallara
Red leather leaf	Moderately susceptible	Better than Carrolup; same as Durack, Brusher, Mulgara, Wintaroo and Yallara
Bacterial blight	Moderately resistant	Better than Brusher, Carrolup, Durack and Yallara; same as Mulgara and Wintaroo
Stem rust in South Australia	Resistant to susceptible	Depending on the pathotype present reactions for all varieties will vary
Stem rust in Western Australia	Resistant to moderately susceptible	Depending on the pathotype present reactions for all varieties will vary
Leaf rust in South Australia	Moderately susceptible to susceptible	Depending on the pathotype present reactions for all varieties will vary
Leaf rust in Western Australia	Resistant to moderately resistant	Depending on the pathotype present reactions for all varieties will vary
Barley Yellow Dwarf Virus	Moderately susceptible	Same as Brusher, Durack, Mulgara, Wintaroo and Yallara. In WA it is better than Durack, Mulgara, Carrolup and the same as Wintaroo