

## 2023 SEPWA Variety Trials - SUMMARY

In 2023 Harvest of SEPWA trials in the Esperance Port Zone commenced early this year with the first trials being harvested in October while the last trials were harvested in mid-December. SEPWA would like to thank all host growers and DPIRD staff for their contribution and their efforts throughout 2023

Below are the site means for SEPWA variety trials for the period 2011 - 2023 for wheat, barley and canola comparing yield and rainfall received during the growing season – the growing season is determined as being rainfall received between and including the months of April though to October.

	Wheat			Barley			Canola		
Area x Year	Yield	Rainfall	Kg/mm	Yield	Rainfall	Kg/mm	Yield	Rainfall	Kg/mm
<b>High Rainfall - Sandplain</b>	<b>4.095</b>	<b>355</b>	<b>12.1</b>	<b>3.976</b>	<b>377</b>	<b>10.9</b>	<b>1.920</b>	<b>362</b>	<b>5.8</b>
2011	3.366	395	8.6	3.810	298	13.0	1.828	335	5.9
2012	3.131	317	10.2	2.466	286	8.5	1.888	234	8.4
2013	3.634	406	9.4	2.957	336	9.1	1.315	453	2.9
2014	3.268	372	9.0	2.282	404	5.8	2.140	356	6.1
2015	3.433	354	9.8				1.261	338	3.8
2016	4.794	460	10.6	3.346	429	8.4			
2017	4.699	274	17.2	4.469	275	16.1	2.361	343	7.0
2018	4.391	310	13.7	4.995	443	11.3	1.628	339	4.8
2019	4.046	297	13.7	4.745	337	14.1	2.299	338	6.7
2020	4.008	261	15.2	4.446	352	12.7	2.152	309	7.2
2021	5.312	441	12.3	5.825	454	12.9	2.309	450	5.2
2022	5.612	530	10.6	5.204	543	9.9	1.865	561	3.4
2023	4.052	372	12.3	4.979	374	13.3	2.442	330	7.9
<b>Medium Rainfall - Mallee</b>	<b>3.650</b>	<b>309</b>	<b>12.3</b>	<b>3.918</b>	<b>308</b>	<b>13.3</b>	<b>1.817</b>	<b>292</b>	<b>6.7</b>
2011	2.985	318	9.4	3.000	329	9.4	1.536	279	5.3
2012	3.124	197	16.0	3.051	223	13.8	1.954	242	8.1
2013	3.521	323	11.7	3.411	382	9.9	1.806	348	5.5
2014	2.813	277	10.3	2.979	250	11.9	1.383	377	3.7
2015	3.490	357	9.7	4.673	223	21.0	1.748	330	5.4
2016	4.048	394	10.4	4.410	411	11.4	2.089	400	5.5
2017	4.291	285	15.0	4.194	301	13.9	1.671	287	5.8
2018	2.898	305	9.7	5.003	308	17.4	1.654	204	8.2
2019	1.979	292	6.8	2.127	226	9.2	1.664	148	11.3
2020	5.282	232	22.8	4.188	231	18.1	2.236	242	9.2
2021	4.409	309	14.2	5.132	320	16.1	2.014	242	8.3
2022	7.257	360	22.7	5.616	417	13.7	2.100	309	6.8
2023	2.960	301	9.8	4.385	291	15.1	2.359	291	8.1
<b>Low Rainfall - Mallee</b>	<b>2.852</b>	<b>234</b>	<b>12.3</b>	<b>2.933</b>	<b>238</b>	<b>12.4</b>	<b>1.244</b>	<b>227</b>	<b>5.6</b>
2011	1.995	221	9.0	1.380	243	5.8	0.782	215	3.5
2012	1.829	151	12.0	2.065	169	11.9	0.848	158	5.3
2013	3.767	280	13.9	3.968	273	15.1	1.432	252	5.8
2014	2.534	254	10.2	2.398	257	9.3	1.064	271	3.9
2015	2.619	239	10.9	3.513	234	15.0	1.435	280	5.1
2016	2.934	257	11.7	3.580	261	13.8	1.548	266	5.9
2017	3.221	213	15.4	3.213	204	15.6	1.215	217	5.5
2018	2.851	199	15.7	1.860	189	9.6	0.853	226	4.2
2019	1.396	173	8.2	1.252	183	6.9	0.794	185	4.6
2020	2.738	175	15.2	2.364	179	13.2	1.328	166	8.0
2021	3.507	297	12.0	3.625	281	13.1	1.814	255	7.1
2022	4.895	366	13.4	4.301	358	12.0	1.903	336	5.8
2023	2.801	204	13.7	2.916	201	14.6	1.511	192	7.9
<b>Average</b>	<b>3.436</b>	<b>290</b>	<b>12.2</b>	<b>3.332</b>	<b>278</b>	<b>12.3</b>	<b>1.651</b>	<b>294</b>	<b>6.0</b>

## Statistical Analysis of variance (ANOVA)

The SEPWA variety trials design is based on a nearest neighbour using farmers own control varieties in large scale trial plots. At harvest all varieties are statistically analysed using Analysis of Variance (ANOVA) to determine if varieties are significantly different to the control variety for yield. The colour code system opposite has been used to visual determine yield data in graphs showing yield to identify those varieties significantly greater or lesser than the control variety at an LSD 5%.

*Results are on SEPWA webpage.*

	<b>Control Variety</b>
	<b>Not Significant to Control</b>
	<b>Significantly greater than control</b>
	<b>Significantly less than control</b>

## Economic Ranking (\$/ha)

The Economic ranking is based yield and on the varietal classification or quality attributes. Using current wheat, barley and canola pricing for the Esperance Port Zone (EPZ) and determining the varietal classification and/or quality parameters the Economic Ranking is calculated.

## Wheat Variety Trials

For the period 2011 – 2023 SEPWA, 65 wheat varieties in the Esperance Port Zone (EPZ). SEPWA contacts various breeding and commercial companies for the latest and newest varieties on the verge of release and with CBH undertake quality testing including protein, moisture, gluten, starch, hectolitre weight, falling numbers and screenings. These results determine the Economic Ranking based on the varietal classification e.g., Hard or APW and current pricing at time of harvest.

Area x Year	Yield (t/ha)	Protein %	Hect Wt.	Falling Numbers	Economic Ranking	Kg/mm
<b>High Rainfall - Sandplain</b>	<b>4.095</b>	<b>11.3</b>	<b>76.8</b>	<b>335</b>	<b>\$1,232</b>	<b>12.1</b>
2011	3.366	11.6	77.4	286	\$879	8.6
2012	3.131	11.7	75.6	335	\$1,007	10.2
2013	3.634	12.4	78.1	304	\$997	9.4
2014	3.268	12.2	76.1	319	\$903	9.0
2015	3.433	10.4	74.2	286	\$892	9.8
2016	4.794	10.5	78.2	367	\$1,088	10.6
2017	4.699	10.9	73.4	358	\$1,053	17.2
2018	4.391	11.4	74.8	353	\$1,390	13.7
2019	4.009	11.5	79.4	363	\$1,365	13.6
2020	4.011	10.7	74.6	332	\$1,195	15.3
2021	5.312	10.7	80.0	350	\$1,767	12.3
2022	5.612	12.2	76.4	263	\$2,336	10.6
2023	4.052	11.6	78.1	366	\$1,652	12.3
<b>Medium Rainfall - Mallee</b>	<b>3.650</b>	<b>11.0</b>	<b>78.1</b>	<b>335</b>	<b>\$1,094</b>	<b>12.3</b>
2011	2.985	11.4	75.4	146	\$695	9.4
2012	3.124	10.9	78.0	364	\$990	16.0
2013	3.521	11.2	79.8	409	\$992	11.7
2014	2.813	12.6	79.8	333	\$790	10.3
2015	3.490	9.6	77.2	327	\$947	9.7
2016	4.048	9.5	78.7	383	\$905	10.4
2017	4.346	9.7	79.0	370	\$1,073	15.1
2018	2.898	9.1	79.2	353	\$944	9.7
2019	1.979	12.1	81.6	346	\$696	6.8
2020	5.282	10.5	79.4	318	\$1,650	22.8
2021	4.409	11.8	79.6	330	\$1,523	14.2
2022	7.257	9.7	76.9	321	\$2,816	22.7
2023	2.960	13.2	73.3	363	\$1,163	9.8
<b>Low Rainfall - Mallee</b>	<b>2.852</b>	<b>11.1</b>	<b>78.8</b>	<b>357</b>	<b>\$869</b>	<b>12.3</b>
2011	1.995	12.6	75.5	261	\$518	9.0
2012	1.829	11.9	77.3	342	\$584	12.0
2013	3.767	10.1	81.5	407	\$1,047	13.9
2014	2.534	12.2	78.3	308	\$690	10.2
2015	2.619	10.3	74.9	337	\$705	10.9
2016	2.934	9.4	81.6	396	\$655	11.7
2017	3.225	10.0	79.9	385	\$777	15.4
2018	2.851	10.0	80.0	367	\$934	15.7
2019	1.396	13.4	80.6	403	\$489	8.2
2020	2.738	11.0	77.0	386	\$874	15.2
2021	3.507	10.6	80.9	352	\$1,135	12.0
2022	5.012	10.0	77.5	326	\$1,986	13.3
2023	2.801	11.4	79.0	369	\$1,119	13.7
<b>Average</b>	<b>3.436</b>	<b>11.1</b>	<b>78.0</b>	<b>345</b>	<b>\$1,040</b>	<b>12.2</b>

Within the SEPWA variety trials, there are various wheat classifications for varieties and can range from Australian Hard (AH), Australian Premium White (APW) and just FED varieties. The following table demonstrates how frequently (%) AH and APW varieties achieve their classification within the SEPWA trials for AH and APW varieties – based on quality parameters such as protein, screenings, hectolitre weight and falling numbers.

<b>SEPWA Wheat Variety Trials - Hard and APW Varieties achieving Classification Esperance Port Zone 2011-2023</b>								
<b>Variety Classification</b>	<b>CLASSIFICATION ACHIEVED ex CBH Testing</b>							
	<b>AH1</b>	<b>AH2</b>	<b>APW1</b>	<b>APW2</b>	<b>ASW1</b>	<b>AUW1</b>	<b>AGP1</b>	<b>FED1</b>
AH	7%	16%	17%	7%	24%	2%	16%	9%
APW			48%	6%	18%	2%	12%	13%

<b>SEPWA Wheat Variety Trials - Hard and APW Varieties achieving Classification Esperance Port Zone 2023</b>								
<b>Variety Classification</b>	<b>CLASSIFICATION ACHIEVED ex CBH Testing</b>							
	<b>AH1</b>	<b>AH2</b>	<b>APW1</b>	<b>APW2</b>	<b>ASW1</b>	<b>AUW1</b>	<b>AGP1</b>	<b>FED1</b>
AH	9%	24%	19%	3%	15%	19%	8%	5%
APW			64%	9%	14%	14%		

## 2023 Summaries Wheat Yields, Quality and Economic Ranking

In 2023 there are ELEVEN (11) wheat a variety trials sown in the Esperance Port Zone. This year there was no site at Munglinup.

<b>Species</b>	<b>Locality</b>	<b>Trading Name</b>	<b>Soil Type</b>
Wheat	Beaumont	Yupiri - WA	Duplex: Sand over Clay
Wheat	Condingup	Kyarran Farming Co	Duplex (Sandplain)
Wheat	Neridup	J A Delroy & B N Morcombe	Sand/Sandy Loam
Wheat	Grass Patch	RJ & KP Longbottom	Duplex
Wheat	Salmon Gums	Brimlo Farms	Mallee - Clay Loam
Wheat	Cascade	Clare Downs	Loamy Clay
Wheat	Coomalbidgup	Piggott Family Trust	Sand/Gravel
Wheat	Wittenoom Hills	Laurina Farms	Sandy Loam
Wheat	Hopetoun	C Foulds	Sandy Loam
Wheat	Ravensthorpe	Nathan Mudie	Gravelly Loam
Wheat	Lake King	Lachie Ayers	Duplex

The following tables are yields and quality data for the 2023 SEPWA wheat variety trials.

2023 SEPWA Wheat Variety Trial - Yield and Quality								
Year	Yield (t/ha)	Protein %	Gluten %	Starch %	Hect Wt.	Falling Numbers	Economic Ranking	Kg/mm
<b>High Rainfall - Sandplain</b>	<b>4.281</b>	<b>11.6</b>	<b>26.9</b>	<b>75.6</b>	<b>79.1</b>	<b>362</b>	<b>\$1,758</b>	<b>13.3</b>
Condingup	3.817	12.3	29.2	80.8	77.5	386	\$1,586	8.4
Neridup	5.128	11.6	27.3	77.8	82.3	353	\$2,112	11.5
Hopetoun	3.868	10.9	23.3	66.1	77.4	344	\$1,558	21.6
<b>Medium Rainfall - Mallee</b>	<b>2.960</b>	<b>13.2</b>	<b>32.1</b>	<b>79.3</b>	<b>73.3</b>	<b>363</b>	<b>\$1,163</b>	<b>9.8</b>
Wittenoom Hills	2.716	13.4	32.5	79.3	74.8	370	\$1,086	9.3
Coomalbidgup	3.185	13.1	31.7		71.9	356	\$1,234	10.3
<b>Low Rainfall - Mallee</b>	<b>2.801</b>	<b>11.4</b>	<b>26.5</b>	<b>74.9</b>	<b>79.0</b>	<b>369</b>	<b>\$1,119</b>	<b>13.7</b>
Beaumont	4.158	12.5	28.8	65.2	69.5	397	\$1,541	16.4
Grass Patch	3.590	11.3	26.1	82.5	80.3	374	\$1,465	18.9
Salmon Gums	1.933	13.1	32.4	78.6	81.0	401	\$797	11.5
Cascade	2.707	10.0	20.1	75.3	78.7	351	\$1,086	12.2
Ravensthorpe	2.412	13.0	37.2	73.5	80.5	399	\$1,015	13.1
Lake King	2.036	9.1	16.9		83.2	309	\$817	10.3
<b>Average</b>	<b>3.258</b>	<b>11.8</b>	<b>27.7</b>	<b>75.7</b>	<b>77.8</b>	<b>366</b>	<b>\$1,311</b>	<b>12.8</b>

As previously mentioned, SEPWA contacts various breeding and commercial companies for the latest and newest varieties on the verge of release.

In the 2023 there were wheat varieties from InterGrain, LongReach and Australian Grain Technology (AGT).

From InterGrain varieties included Thumper IGW 6884 is a mid-maturing, high-yielding, APW (potential AH), Genie IGW 6754 a mid-slow maturity variety and has similar yields to RockStar in southern WA, Dozer IGW 6783 CL an APW variety which has a quick-mid maturing, vigorous plant type and good lodging tolerance and a imidazolinone (IMI) tolerant wheat. Also, from InterGrain was IGW6755 is a unique variety as it is a spring wheat with a long maturity (between Valiant and Illabo) and is suitable for a sowing in late March to early April but can be pushed later into April in softer environments. Other varieties from InterGrain include Brumby and Valiant CL Plus.

From LongReach is LRPB Anvil CL Plus, a quick AH quality, two-gene imidazolinone (IMI) tolerant variety and is an alternative IMI-tolerant variety to Chief CL Plus and Hammer CL Plus and is ideally suited to the fast-finishing low-medium rainfall areas of WA and is competitive with other main AH varieties in sub 3.0 t/ha environments.

Wheat varieties from Australian Grain Technology (AGT) include Calibre is a first Scepter cross to be released and has many added agronomic advantages over Scepter, including a long coleoptile (similar to Magenta), improved powdery mildew resistance, and a sprouting tolerance similar to Mace and Scepter and in WA classification is AH. Other varieties from Australian Grain Technology (AGT) include Scepter which is still the benchmark for wheat varieties in the Esperance Port Zone and Denison a long season spring wheat which is between 7-10 days longer than Scepter in a main season sowing window and approximately 14-20 days longer than Scepter when sown in early - mid-April.

## 2023 Yield and Quality for High Rainfall - Sandplain

Variety × Locations	Grade	Yield	Protein %	Gluten %	Starch %	Hect Wt.	Screenings %	Falling Numbers	Economic Ranking	kg/mm
<b>Condingup</b>										
Brumby	APW1	3.856	12.4	29.5	78.9	78.5	2.2	401	\$1,600	8.5
Calibre	AH2	4.215	12.4	29.1	81.7	74.1	1.2	421	\$1,762	9.3
Denison	APW1	3.930	12.6	30.5	82.6	81.7	2.0	333	\$1,631	8.7
Genie IGW 6754	AH2	3.837	11.9	28.3	81.4	77.5	2.0	382	\$1,604	8.5
LRPB Anvil CL	AH2	3.491	11.2	25.7	83.1	80.0	1.7	372	\$1,459	7.7
Scepter	AUH 2	3.385	13.6	33.8	83.7	72.1	1.8	351	\$1,364	7.5
Thumper IGW 6884	AH2	3.800	12.3	28.6	80.4	77.0	1.8	382	\$1,588	8.4
Valiant CL	AH2	3.885	12.0	27.9	82.8	75.6	1.3	386	\$1,624	8.6
<b>Neridup</b>										
Brumby	AUH 2	5.67	11.6	27.8	76.7	83.3	0.5	281	\$2,285	12.7
Calibre	AH2	5.83	12.3	30.2	76.8	81.3	0.6	379	\$2,437	13.1
Denison	APW1	6.06	11.0	25.3	81.0	84.9	0.9	328	\$2,515	13.6
Dozer IGW 6783 CL	APW1	4.11	11.4	26.6	76.9	78.7	3.8	406	\$1,706	9.2
Genie IGW 6754	APW1	5.31	10.9	25.7	73.2	85.0	1.2	344	\$2,204	11.9
IGW 6755	AUW1	4.49	10.9	22.3	86.7	82.6	2.4	293	\$1,616	10.1
LRPB Anvil CL	AH1	5.53	13.1	32.2	79.4	77.8	2.4	394	\$2,367	12.4
Scepter	APW1	4.86	11.3	26.6	75.9	82.7	0.6	373	\$2,021	10.9
Valiant CL	AH2	5.100	12.6	31.0	79.8	83.3	1.0	318	\$2,132	11.5
<b>Hopetoun</b>										
Brumby	APW1	3.408	10.5	21.4	66.7	73.9	4.7	335	\$1,414	19.0
Calibre	AUH 2	3.429	11.5	25.5	63.1	74.4	5.8	391	\$1,382	19.2
Denison	APW2	3.221	10.2	20.6	67.5	80.1	2.6	359	\$1,327	18.0
Genie IGW 6754	AUW1	3.208	11.8	27.3	65.7	71.2	14.6	327	\$1,155	17.9
LRPB Anvil CL	APW1	3.75	10.6	22.0	61.3	79.2	2.0	387	\$1,556	20.9
Scepter	APW1	4.691	10.7	22.5	68.5	79.2	3.6	322	\$1,882	26.2
Valiant CL	AH2	2.900	11.5	25.7	63.1	78.2	4.0	350	\$1,212	16.2

## 2023 Yield and Quality for Medium Rainfall - Mallee

Variety x Locations	Grade	Yield	Protein %	Gluten %	Starch %	Hect Wt.	Screenings %	Falling Numbers	Economic Ranking	kg/mm
<b>Wittenoom Hills</b>										
Brumby	AUH 2	2.496	12.7	30.3	77.3	73.7	7.3	346	\$1,006	8.6
Calibre	AUH 2	2.84	13.4	32.7	80.1	74.6	7.8	370	\$1,145	9.8
Denison	AUH 2	2.783	13.8	34.1	77.1	75.7	9.1	401	\$1,122	9.6
Dozer IGW 6783 CL	AUH 2	2.581	12.9	30.7	80.3	73.0	8.5	442	\$1,040	8.9
Genie IGW 6754	AUW1	2.395	14.2	35.9	75.0	74.8	11.3	343	\$862	8.2
LRPB Anvil CL	AUH 2	2.845	12.4	29.4	82.3	76.0	5.9	336	\$1,147	9.8
Thumper IGW 6884	AUH 2	2.581	13.4	32.1	79.2	73.1	9.4	370	\$1,040	8.9
Valiant CL	AUH 2	2.713	13.8	33.8	80.4	78.4	5.7	352	\$1,093	9.3
<b>Coomalbidgup</b>										
Brumby	AUW1	3.042	12.3	28.5		71.7	10.3	342	\$1,095	9.8
Calibre	AUH 2	3.571	12.5	29.9		72.3	8.4	338	\$1,439	11.5
Denison	AUW1	3.046	14.3	35.3		76.5	17.3	367	\$1,097	9.8
Dozer IGW 6783 CL	FED1	2.763	14.1	34.4		62.1	20.1	344	\$1,058	8.9
Genie IGW 6754	FED1	3.281	13.5	33.4		72.4	28.0	348	\$1,257	10.6
LRPB Anvil CL	AUH 2	3.526	13.0	31.4		74.0	6.2	345	\$1,421	11.4
Scepter	AUH 2	3.293	13.3	32.3		71.1	8.2	375	\$1,299	10.6
Thumper IGW 6884	AUW1	2.831	10.7	22.7		75.2	7.4	325	\$1,019	9.1
Valiant CL	AUH 2	2.874	13.9	34.6		75.0	8.7	346	\$1,158	9.3

## 2023 Yield and Quality for Low Rainfall - Mallee

Variety × Locations	Grade	Yield	Protein %	Gluten %	Starch %	Hect Wt.	Screenings %	Falling Numbers	Economic Ranking	kg/mm
<b>Beaumont</b>										
Brumby	AUH 2	4.331	12.5	27.1	62.4	73.6	2.9	456	\$1,745	17.1
Calibre	AUW1	4.181	12.9	30.2	73.6	68.6	3.1	415	\$1,505	16.5
Denison	AUW1	3.694	11.6	25.5	67.5	70.3	3.8	305	\$1,330	14.5
Dozer IGW 6783 CL	FED1	4.062	12.0	26.7	70.9	66.4	4.2	414	\$1,556	16.0
LRPB Anvil CL	AUH 2	3.871	13.3	30.8	69.5	72.3	1.1	421	\$1,560	15.2
Scepter	AUW1	4.457	12.5	29.0	60.8	68.9	2.4	377	\$1,605	17.6
Valiant CL	AUW1	3.609	13.0	32.1	65.4	68.0	2.7	450	\$1,299	14.2
<b>Grass Patch</b>										
Brumby	APW1	3.258	11.0	24.9	81.1	80.8	2.7	373	\$1,352	17.1
Calibre	APW1	4.067	11.1	25.6	82.6	80.1	2.8	392	\$1,688	21.4
Denison	AUH 2	3.125	11.6	27.2	84.1	79.0	5.3	351	\$1,259	16.4
Dozer IGW 6783 CL	AGP1	3.570	11.4	25.9	83.0	77.1	5.6	351	\$1,367	18.8
Genie IGW 6754	AGP1	3.501	11.2	26.1	79.6	82.0	8.3	380	\$1,341	18.4
LRPB Anvil CL	AH2	2.948	11.6	26.8	83.5	81.9	2.2	371	\$1,232	15.5
Valiant CL	AH2	3.234	11.7	27.9	83.3	81.7	2.2	346	\$1,352	17.0
<b>Salmon Gums</b>										
Brumby	APW1	1.692	13.0	32.4	77.2	82.0	4.8	368	\$702	10.1
Calibre	AH2	2.038	12.5	30.8	79.6	78.1	3.4	359	\$852	12.1
Denison	APW1	1.923	12.8	31.7	77.8	82.1	1.1	372	\$798	11.4
Dozer IGW 6783 CL	AUH 2	1.846	13.5	32.3	79.3	77.7	5.9	417	\$744	11.0
Genie IGW 6754	AUW1	1.499	14.4	37.0	76.7	81.1	10.4	477	\$540	8.9
LRPB Anvil CL	AH2	2.422	11.7	27.3	82.6	82.5	1.4	392	\$1,012	14.4
Scepter	AH1	2.161	13.5	33.9	77.0	82.3	2.3	401	\$925	12.9
Valiant CL	AH1	1.884	13.5	33.9	78.5	82.3	1.1	424	\$806	11.2
<b>Cascade</b>										
Brumby	APW2	2.623	10.1	20.5	73.0	78.2	2.3	366	\$1,081	11.9
Calibre	AGP1	2.667	10.3	21.2	76.7	73.5	2.7	357	\$1,021	12.1
Denison	ASW1	2.774	9.9	20.3	77.7	79.2	2.5	384	\$1,118	12.5
Dozer IGW 6783 CL	APW2	2.729	10.1	20.6	79.8	77.2	2.1	364	\$1,124	12.3
Genie IGW 6754	FED1	2.458	10.3	21.1	73.8	77.6	10.1	387	\$941	11.1
LRPB Anvil CL	APW2	2.733	10.3	21.3	81.2	78.7	1.8	335	\$1,126	12.4
Scepter	ASW1	2.875	9.7	18.4	72.0	80.6	1.5	333	\$1,144	13.0
Valiant CL	ASW1	2.296	10.5	22.8	78.7	78.8	2.8	333	\$953	10.4
<b>Ravensthorpe</b>										
Brumby	APW1	2.749	12.7	31.9	72.3	81.5	1.5	342	\$1,141	15.0
Calibre	AH2	2.795	12.8	32.1	76.4	80.3	1.3	376	\$1,168	15.2
Denison	APW1	2.372	13.4	83.4	76.1	79.7	1.6	364	\$984	12.9
Dozer IGW 6783 CL	AH1	2.184	13.2	33.0	75.0	79.5	1.5	428	\$935	11.9
Genie IGW 6754	AH1	2.353	13.8	35.1	72.7	78.4	2.1	393	\$1,007	12.8
Scepter	AH2	2.393	12.7	31.8	72.0	81.0	1.4	418	\$1,005	13.0
Valiant CL	AH1	2.112	13.7	34.5	76.0	81.0	1.6	399	\$904	11.5
<b>Lake King</b>										
Brumby	ASW1	1.867	9.0	16.4		82.6	0.3	309	\$752	9.4
Calibre	ASW1	2.345	8.4	14.9		81.5	0.5	314	\$945	11.8
Denison	ASW1	1.844	9.4	17.6		82.6	1.0	312	\$743	9.3
Dozer IGW 6783 CL	ASW1	2.209	8.7	15.3		82.1	0.3	305	\$890	11.1
Genie IGW 6754	AGP1	1.799	9.1	16.7		83.9	1.6	286	\$689	9.1
LRPB Anvil CL	ASW1	2.095	9.5	18.1		84.5	0.3	309	\$844	10.6
Scepter	ASW1	2.017	9.1	17.1		83.6	0.5	313	\$813	10.2
Valiant CL	ASW1	2.186	9.5	17.9		83.7	0.2	306	\$881	11.0



The following tables show how wheat varieties performed when compared to average site yields in 2023. High-lighted are wheat varieties which yielded above 5% of the site mean. Scepter is still the benchmark for wheat varieties in the Esperance Port Zone.

2023 Wheat Yield Summary - Percentage of site mean											
	High Rainfall - Sandplain			Medium Rainfall - Mallee		Low Rainfall - Mallee					
Variety	Condingup	Neridup	Hopetoun	Coomalbidgup	Wittenoom Hills	Beaumont	Grass Patch	Salmon Gums	Cascade	Ravensthorpe	Lake King
Brumby	101%	111%	88%	96%	92%	104%	91%	88%	97%	114%	92%
Calibre	110%	114%	89%	112%	105%	101%	113%	105%	99%	116%	115%
Denison	103%	118%	83%	96%	102%	89%	87%	99%	102%	98%	91%
Dozer IGW 6783 CL		80%		87%	95%	98%	99%	95%	101%	91%	109%
Genie IGW 6754	101%	104%	83%	103%	88%		98%	78%	91%	98%	88%
IGW 6755		88%									
LRPB Anvil CL	91%	108%	97%	111%	105%	93%	82%	125%	101%		103%
Scepter	89%	95%	121%	103%		107%		112%	106%	99%	99%
Thumper IGW 6884	100%			89%	95%						
Valiant CL	102%	99%	75%	90%	100%	87%	90%	97%	85%	88%	107%
<b>Average</b>	<b>3.817</b>	<b>5.128</b>	<b>3.868</b>	<b>3.185</b>	<b>2.716</b>	<b>4.158</b>	<b>1.933</b>	<b>3.590</b>	<b>2.707</b>	<b>2.412</b>	<b>2.036</b>

Variety > 5% above site mean.

## Falling Numbers

In 2023 SEPWA wheat variety trials, seasonal conditions did not really impact or attribute to falling numbers however in previous years factors such as maturity have affected some varieties with some varieties prone to low sprouting tolerance.

2023 SEPWA Wheat Variety Trials - Falling Numbers											
	High Rainfall - Sandplain			Medium Rainfall - Mallee		Low Rainfall - Mallee					
Variety	Condingup	Neridup	Hopetoun	Wittenoom Hills	Coomalbidgup	Beaumont	Grass Patch	Salmon Gums	Cascade	Ravensthorpe	Lake King
Brumby	401	281	335	346	342	456	373	368	366	342	309
Calibre	421	379	391	370	338	415	392	359	357	376	314
Denison	333	328	359	401	367	305	351	372	384	364	312
Dozer IGW 6783 CL		406		442	344	414	351	417	364	428	305
Genie IGW 6754	382	344	327	343	348		380	477	387	393	286
IGW 6755		293									
LRPB Anvil CL	372	394	387	336	345	421	371	392	335		309
Scepter	351	373	322		375	377		401	333	418	313
Thumper IGW 6884	382			370	325						
Valiant CL	386	318	350	352	346	450	346	424	333	399	306
<b>Average</b>	<b>386</b>	<b>353</b>	<b>344</b>	<b>370</b>	<b>356</b>	<b>397</b>	<b>374</b>	<b>401</b>	<b>351</b>	<b>399</b>	<b>309</b>



## Long Season Wheat/Barley Variety Trials

In the Long Season wheat trial at Warakirri, Condingup there are new varieties including IGW6755 from Intergrain, a unique variety as it is a spring wheat with a long maturity (between Valiant and Illabo).

From SeedForce is a winter white wheat **RGT Waugh** which is bearded, medium-long growing season winter wheat for medium and high rainfall zone. The variety has a good disease resistance profile with very good resistance to stripe rust and has a short stiff straw, harvest quality is good producing large bold grain with a high thousand grain weight. RGT Waugh is currently a feed and is under review for classification.

S & W seeds have three (3) varieties and include **Severn** a white grain winter, awnless, quick winter wheat variety, adaptable to a wide range of environmental conditions and has a dense, early tillering trait and good regrowth potential provides quality forage for grazing. Severn is similar to EGA Wedgetail for time to stem elongation, but 4-7 days quicker to maturity and is a feed quality variety. The other two (2) varieties from S & W Seeds are winter wheat SWW21-0001 and 0002 both are winter wheat's currently being evaluated.

From Australian Grain Technology (AGT) is Illabo and Denison, Illabo is a winter wheat a dual-purpose wheat variety for grain and grazing options and is 7 days longer than Longsword and 3 days earlier than Wedgetail. Illabo has an AH classification in WA while Denison is a long season spring wheat which is between 7-10 days longer than Scepter in a main season sowing window and approximately 14-20 days longer than Scepter when sown in early - mid-April.

Variety	Maturity	Yield (t/ha)	% of Illabo	Protein %	Gluten %	Starch %	Hect kg/hl	Screen %	Falling Numbers	Grade	Economic Ranking
RGT Waugh	Winter	2.091	67%	13.3	32.1	80.7	59.9	10.1	352	FED1	\$801
Denison	Late	2.522	81%	11.4	25.7	75.3	76.3	3.1	393	APW1	\$1,047
SWW21-0002	Winter	2.884	93%	10.7	22.7	83.6	72.9	8.6	381	AUW1	\$1,038
IGW6755	Late	2.993	96%	10.0	20.0	78.6	74.0	6.3	356	AGP1	\$1,146
Illabo	Winter	3.115	100%	11.2	25.0	72.0	73.0	2.6	359	AUW1	\$1,121
Newton Barley (2 row)	Winter	3.246	104%	10.7		59.1	57.4	11.7		BFED1	\$1,162
Severn ADV08.0008	Winter	3.334	107%	10.7	23.3	82.9	77.6	2.2	419	FED1	\$1,277
SWW21-0001	Winter	3.417	110%	10.7	22.8	72.8	76.6	3.6	413	APW1	\$1,418

Also, included in the Long Season Wheat/Barley trial is a new winter two row barley from SeedNet, **Newton Barley** is the first new winter type barley released in Australia since Urambie in 2005. Being a winter type, Newton requires a period of cold temperature before it switches from vegetative to reproductive growth, so it can be sown early and grazed. Newton is a high tillering variety with very prostrate growth, so it is very competitive against weeds and produces a large amount of biomass. In terms of phenology, Newton behaves like a mid-developing winter wheat, so it is much later to anthesis than spring barley, with flowering time between EGA Wedgetail and DS Bennett. If sown early Newton has the potential to produce very high grain yield but if it is not grazed it will need an application of Plant Growth Regulator to manage the large canopy. Newton is a 2-row barley variety with Feed quality.

## Barley Variety Trials

For the period 2011 – 2023 SEPWA have tested 43 barley varieties in SEPWA barley variety trials throughout the Esperance Port Zone (EPZ) each year. Like wheat, barley and other crop species SEPWA contacts breeding and commercial companies for the latest and newest releases varieties to be included in these trials.

As in previous years at harvest sub-samples are taken of all barley varieties including all current and pending malt varieties with CBH undertaking quality testing including protein, moisture, colour screenings and hectolitre weight. These results determine the Economic Ranking based on the varietal classification e.g., Malt or Feed and current pricing at time of harvest.

Below are the site means for SEPWA variety trials for the period 2011 - 2023 for barley comparing yield and rainfall received during the growing season – the growing season is determined as being rainfall received between and including the months of April though to October.

<b>Barley Yields and Quality data for SEPWA Trials 2011-2023</b>						
<b>Year x Area</b>	<b>Yield (t/ha)</b>	<b>Protein %</b>	<b>Colour</b>	<b>Hectolitre Weight</b>	<b>Farmanco Economic Ranking</b>	<b>Yield (kg/mm)</b>
<b>High Rainfall - Sandplain</b>	<b>3.981</b>	<b>10.8</b>	<b>56</b>	<b>62.0</b>	<b>\$1,095.48</b>	<b>10.9</b>
2011	3.810	10.9	55	62.0	\$896.12	13.0
2012	2.466	11.6	56	59.2	\$691.87	8.5
2013	2.957	13.2	54	61.0	\$652.12	9.1
2014	2.282	10.6	56	62.5	\$533.78	5.8
2016	3.346	8.9	57	64.5	\$658.14	8.4
2017	4.469	10.3	56	64.3	\$1,159.44	16.1
2018	4.995	9.6	55	65.2	\$1,537.05	11.3
2019	4.745	12.5	56	63.4	\$1,327.46	14.1
2020	4.459	10.5	56	62.4	\$1,187.51	12.7
2021	5.825	9.9	55	62.2	\$1,601.78	12.9
2022	5.204	9.2	56	59.5	\$1,783.80	9.9
2023	5.094	11.9	59	59.1	\$1,823.68	13.6
<b>Medium Rainfall - Mallee</b>	<b>3.914</b>	<b>10.9</b>	<b>57</b>	<b>64.3</b>	<b>\$1,076.24</b>	<b>13.3</b>
2011	3.000	11.6	56	64.9	\$739.06	9.4
2012	3.051	11.5	57	63.4	\$889.37	13.8
2013	3.411	13.0	57	62.4	\$803.30	9.9
2014	2.979	10.8	56	64.3	\$734.99	11.9
2015	4.673	8.6	57	65.7	\$1,085.26	21.0
2016	4.410	8.2	57	67.0	\$859.94	11.4
2017	4.194	9.4	57	66.1	\$1,093.40	13.9
2018	5.026	8.5	56	63.3	\$1,557.20	17.2
2019	2.127	13.1	57	59.9	\$598.49	9.2
2020	4.190	11.4	56	65.2	\$1,115.93	18.1
2021	5.132	10.9	57	65.4	\$1,420.45	16.1
2022	5.616	9.4	57	64.1	\$1,957.86	13.7
2023	4.385	12.6	63	65.6	\$1,576.80	15.1
<b>Low Rainfall - Mallee</b>	<b>2.933</b>	<b>11.4</b>	<b>59</b>	<b>64.7</b>	<b>\$795.07</b>	<b>12.4</b>
2011	1.380	12.0	55	61.6	\$321.14	5.8
2012	2.065	11.0	58	62.4	\$595.18	11.9
2013	3.968	12.2	57	65.0	\$901.02	15.1
2014	2.398	10.6	58	64.0	\$579.90	9.3
2015	3.513	11.0	61	63.1	\$818.82	15.0
2016	3.580	9.7	60	63.2	\$710.54	13.8
2017	3.228	10.4	58	64.7	\$834.71	15.5
2018	1.881	10.9	56	65.3	\$583.82	10.0
2019	1.255	15.0	60	64.1	\$347.38	6.9
2020	2.364	11.6	59	73.3	\$629.02	13.2
2021	3.625	11.1	59	65.6	\$999.71	13.1
2022	4.306	10.2	58	62.9	\$1,501.97	12.1
2023	2.916	11.7	63	63.7	\$1,046.01	14.6
<b>Average</b>	<b>3.330</b>	<b>11.2</b>	<b>58</b>	<b>64.1</b>	<b>\$908.82</b>	<b>12.3</b>

Like wheat, at harvest barley sub-samples are taken of and CBH undertake quality testing including protein, moisture, colour screenings and hectolitre weight. Based on quality standards received from CBH, the following table and graph show the percentage of malt accredited varieties achieving the various barley classification from the SEPWA Barley variety trials for 2011 – 2023.

<b>SUMMARY MALTING VARIETIES 2011 - 2023</b>				
<b>Percentage Malting Varieties achieving Malt Classification</b>				
<b>Area</b>	<b>District</b>	<b>MALT 1</b>	<b>MALT 2</b>	<b>BFED1</b>
<b>High Rainfall - Sandplain</b>	<b>Condingup</b>	15%	22%	63%
	<b>Neridup</b>	5%	17%	78%
	<b>Hopetoun/Jerdacuttup</b>	13%	23%	65%
<b>Medium Rainfall - Mallee</b>	<b>Wittenoom Hills</b>	33%	12%	55%
	<b>Coomalbidgup</b>	27%	23%	51%
	<b>Scaddan</b>	36%	36%	28%
<b>Low Rainfall - Mallee</b>	<b>Beaumont</b>	8%	25%	67%
	<b>Salmon Gums/Grass Patch</b>	20%	18%	62%
	<b>Cascade</b>	24%	24%	52%
	<b>Ravensthorpe/Lake King</b>	23%	20%	57%
<b>Average</b>		<b>20%</b>	<b>21%</b>	<b>59%</b>

## 2023 Summaries Barley Yields, Quality and Economic Ranking

Nine (9) SEPWA barley variety trials are sown in the EPZ.

<b>Species</b>	<b>Locality</b>	<b>Trading Name</b>	<b>Soil Type</b>
Barley	Beaumont	Yupiri - WA	Sandy Loam
Barley	Salmon Gums	Gedrow Farms	Sandy Loam
Barley	Grass Patch	GL & AM Harris	Loam
Barley	Cascade	KT Whiting & Co	Clay - Loam
Barley	Wittenoom Hills	Laurina Farms	Sandy Loam
Barley	Neridup	Jucasta Farm Family Trust	Sand over Gravel over Clay
Barley	Condingup	Sandy Gravel	Sand over Gravel
Barley	Ravensthorpe	AD & SE Duncan	Sandy gravel
Barley	Lake King	CN & GP Brooks	Sandy Loam

<b>Barley Yield and Quality data for SEPWA Trials 2023</b>							
<b>Area x Location</b>	<b>Yield (t/ha)</b>	<b>Protein %</b>	<b>Colour</b>	<b>Hect kg/hl</b>	<b>Screenings %</b>	<b>Economic Ranking</b>	<b>kg/mm</b>
<b>High Rainfall - Sandplain</b>	<b>5.094</b>	<b>11.9</b>	<b>59</b>	<b>59</b>	<b>8.6</b>	<b>\$1,824</b>	<b>13.6</b>
Condingup	5.094	11.9	59	59	8.6	\$1,824	13.6
<b>Medium Rainfall - Mallee</b>	<b>4.385</b>	<b>12.6</b>	<b>63</b>	<b>66</b>	<b>9.6</b>	<b>\$1,577</b>	<b>15.1</b>
Wittenoom Hills	4.385	12.6	63	66	9.6	\$1,577	15.1
<b>Low Rainfall - Mallee</b>	<b>2.870</b>	<b>11.6</b>	<b>63</b>	<b>64</b>	<b>7.4</b>	<b>\$1,030</b>	<b>14.8</b>
Beaumont	3.806	13.2	61	59	12.4	\$1,362	15.0
Grass Patch	2.159	10.7	64	65	2.8	\$782	12.8
Cascade	2.693	12.9	62	68	7.2	\$965	15.8
Salmon Gums	2.544	10.8	65	64	3.7	\$914	16.0
Ravensthorpe	3.031	9.5	62	62	7.2	\$1,086	16.6
Lake King	2.859	11.8	65	62	9.6	\$1,025	11.9
<b>Average</b>	<b>3.357</b>	<b>11.7</b>	<b>62</b>	<b>63</b>	<b>7.8</b>	<b>\$1,204</b>	<b>14.7</b>

Please note: No site at Coomalbidgup in 2023 and Neridup site suffered waterlogging.

Varieties included in 2023 variety trials included varieties from Australian Grain Technology (AGT) which released Titan AX is the world's first CoAXium® barley variety which is tolerant to Aggressor® (Group 1, Quisalofop-P-Ethyl) herbicide and is derived from popular variety Compass. Titan AX is a mid-season maturity variety, slightly later than Compass and similar to RGT Planet. Titan AX has wide adaptation but particularly suited to low-medium rainfall or Mallee type environments and is agronomically very similar to Compass. Other varieties from Australian Grain Technology (AGT) include Minotaur and Cyclops.

Intergrain have released Neo CL Plus which is a mid-spring maturity barley with a disease resistance package including excellent resistance to cereal cyst nematode, powdery mildew and the spot form of net blotch, and useful resistance to the net form of net blotch and leaf scald. Neo CL Plus is ideally suited to medium-high rainfall environments and has a semi-prostrate early growth habit and a medium plant height, good head retention and good tolerance to lodging and head loss. Neo CL Plus has good grain quality attributes including high levels of grain plumpness. Neo has been accepted into Grain's Australia malting accreditation program with the earliest potential final accreditation in March 2025. Other varieties included from Intergrain are Maximus CL, Combat, Spartacus CL Plus, Rosalind and Zena CL.

Laperouse from SeedNet is a barley variety suited for high grain yield in medium-high rainfall zones with improved physical grain quality for earlier sowing opportunities than other spring barley varieties.

Laperouse has excellent straw strength and lodging resistance. Laperouse has improved Net and Spot form of net blotches and is the first variety released by French barley breeding company SECOBRA.

RGT Planet from R.A.G.T is included and is a high yielding spring barley with a has a strong agronomic package that combined with its yield potential and has a good disease resistance to mildew, rhncosporum, net blotch and brown rust. It also has good straw strength and reduced risk of lodging.

<b>2023 SEPWA Barley - High &amp; Medium Rainfall</b>						
<b>Year x Area</b>	<b>Yield (t/ha)</b>	<b>Protein %</b>	<b>Colour</b>	<b>Hect kg/hl</b>	<b>Economic Ranking</b>	<b>Yield (kg/mm)</b>
<b>High Rainfall - Sandplain</b>						
<b>Condingup</b>	<b>5.094</b>	<b>11.9</b>	<b>59</b>	<b>59</b>	<b>\$1,824</b>	<b>13.6</b>
RGT Planet	4.647	12.3	59	57	\$1,664	12.4
Laperouse	4.917	11.9	58	62	\$1,760	13.1
Minotaur	5.139	12.4	61	64	\$1,840	13.7
Cyclops	4.806	12.0	60	62	\$1,721	12.9
Maximus CL	6.444	11.6	58	57	\$2,307	17.2
Commodus CL	5.806	11.7	58	62	\$2,079	15.5
Zena CL	5.139	12.2	58	59	\$1,840	13.7
Combat	5.528	11.4	59	58	\$1,979	14.8
Neo CL Plus	5.556	10.5	59	58	\$1,989	14.9
Titan AX	5.194	10.9	60	59	\$1,859	13.9
<b>Medium Rainfall - Mallee</b>						
<b>Wittenoom Hills</b>	<b>4.385</b>	<b>12.6</b>	<b>63</b>	<b>66</b>	<b>\$1,577</b>	<b>15.1</b>
Laperouse	4.579	12.3	63	67	\$1,662	15.8
Minotaur	4.548	12.4	63	66	\$1,651	15.7
Cyclops	4.686	11.5	63	68	\$1,701	16.1
Maximus CL	4.380	13.0	63	66	\$1,572	15.1
Commodus CL	3.907	13.4	64	64	\$1,399	13.4
Zena CL	4.197	13.0	61	66	\$1,503	14.4
Combat	4.869	11.8	63	63	\$1,743	16.8
Neo CL Plus	4.212	11.8	63	63	\$1,508	14.5
Titan AX	4.106	13.3	63	64	\$1,470	14.1

2023 SEPWA Barley - Low Rainfall - Mallee						
Year x Area	Yield (t/ha)	Protein %	Colour	Hect kg/ha	Economic Ranking	Yield (kg/mm)
<b>Low Rainfall - Mallee</b>	<b>2.870</b>	<b>11.6</b>	<b>63</b>	<b>64</b>	<b>\$1,030</b>	<b>14.8</b>
<b>Beaumont</b>	<b>3.806</b>	<b>13.2</b>	<b>61</b>	<b>59</b>	<b>\$1,362</b>	<b>15.0</b>
Rosalind	3.743	14.4	60	61	\$1,340	14.7
Laperouse	3.956	13.6	63	58	\$1,416	15.6
Cyclops	3.784	13.5	61	59	\$1,355	14.9
Maximus CL	3.973	13.6	61	61	\$1,422	15.6
Commodus CL	3.750	12.2	62	59	\$1,343	14.8
Zena CL	3.166	14.4	59	59	\$1,133	12.5
Combat	4.287	10.5	61	57	\$1,535	16.9
Neo CL Plus	3.465	11.8	61	52	\$1,240	13.6
Titan AX	3.456	13.4	62	61	\$1,237	13.6
<b>Grass Patch</b>	<b>2.159</b>	<b>10.7</b>	<b>64</b>	<b>65</b>	<b>\$782</b>	<b>12.8</b>
Spartacus CLF	2.319	10.6	65	65	\$842	13.8
Laperouse	2.041	10.5	65	66	\$741	12.1
Cyclops	2.291	10.8	65	64	\$832	13.6
Maximus CL	2.250	10.9	64	66	\$817	13.4
Commodus CL	2.166	10.4	64	66	\$786	12.9
Zena CL	1.458	12.8	63	67	\$522	8.7
Combat	2.625	9.9	65	58	\$940	15.6
Neo CL Plus	1.958	10.1	63	66	\$711	11.6
Titan AX	2.000	10.5	65	66	\$726	11.9
<b>Salmon Gums</b>	<b>2.544</b>	<b>10.8</b>	<b>65</b>	<b>64</b>	<b>\$914</b>	<b>16.0</b>
Laperouse	2.653	10.4	66	64	\$950	16.7
Cyclops	2.608	10.3	66	60	\$934	16.4
Maximus CL	2.478	11.2	65	69	\$896	15.6
Commodus CL	2.446	10.3	64	58	\$876	15.4
Zena CL	2.185	12.0	63	60	\$782	13.7
Combat	2.830	9.5	65	59	\$1,013	17.8
Titan AX	2.806	10.5	65	61	\$1,005	17.6
<b>Cascade</b>	<b>2.693</b>	<b>12.9</b>	<b>62</b>	<b>68</b>	<b>\$965</b>	<b>15.8</b>
Spartacus CLF	2.625	13.0	63	68	\$940	15.4
Laperouse	2.823	12.3	62	66	\$1,025	16.6
Minotaur	2.971	12.6	63	69	\$1,064	17.4
Cyclops	2.711	13.1	61	68	\$971	15.9
Maximus CL	2.545	12.9	61	68	\$911	14.9
Commodus CL	2.719	12.7	64	67	\$973	16.0
Zena CL	2.532	14.2	61	67	\$906	14.9
Combat	3.145	11.9	61	66	\$1,126	18.5
Neo CL Plus	2.734	12.8	63	68	\$979	16.0
Titan AX	2.732	12.5	63	69	\$992	16.0
<b>Ravensthorpe</b>	<b>3.031</b>	<b>9.5</b>	<b>62</b>	<b>62</b>	<b>\$1,086</b>	<b>16.6</b>
RGT Planet	3.015	9.3	62	62	\$1,079	16.5
Laperouse	2.705	9.1	62	66	\$968	14.8
Minotaur	3.533	9.3	62	64	\$1,265	19.3
Cyclops	3.344	9.6	62	60	\$1,197	18.3
Maximus CL	3.074	9.8	60	64	\$1,116	16.8
Commodus CL	2.984	9.8	62	61	\$1,068	16.3
Zena CL	3.107	9.8	62	62	\$1,112	17.0
Combat	2.361	9.6	61	61	\$845	12.9
Neo CL Plus	3.279	9.4	61	62	\$1,174	17.9
Titan AX	2.992	9.7	61	63	\$1,071	16.3
<b>Lake King</b>	<b>2.859</b>	<b>11.8</b>	<b>65</b>	<b>62</b>	<b>\$1,025</b>	<b>11.9</b>
Laperouse	3.080	10.6	64	66	\$1,118	12.8
Minotaur	2.968	12.2	65	63	\$1,063	12.3
Cyclops	2.932	11.3	66	59	\$1,050	12.2
Maximus CL	2.803	12.0	65	64	\$1,003	11.6
Commodus CL	3.000	11.7	65	59	\$1,074	12.4
Zena CL	2.657	12.8	64	61	\$951	11.0
Combat	2.612	11.2	65	59	\$935	10.8
Neo CL Plus	2.822	12.0	65	62	\$1,010	11.7

The comparison of barley varieties when compared to yield site average can be seen in the following table for barley sites in 2022. High-lighted are barley varieties which yielded above 5% of the site mean.

Barley Yields - Percentage Site Mean 2023								
	High Rainfall - Sandplain	Medium Rainfall - Mallee	Low Rainfall - Mallee					
Year x Area	Condingup	Wittenoom Hills	Beaumont	Grass Patch	Salmon Gums	Cascade	Ravensthorpe	Lake King
RGT Planet	91%						99%	
Rosalind			98%					
Spartacus CLF				107%		97%		
Laperouse	97%	104%	104%	95%	104%	105%	89%	108%
Minotaur	101%	104%				110%	117%	104%
Cyclops	94%	107%	99%	106%	103%	101%	110%	103%
Combat	109%	111%	113%	122%	111%	117%	78%	91%
Commodus CL	114%	89%	99%	100%	96%	101%	98%	105%
Maximus CL	127%	100%	104%	104%	97%	95%	101%	98%
Zena CL	101%	96%	83%	68%	86%	94%	102%	93%
Neo CL Plus	109%	96%	91%	91%		102%	108%	99%
Titan AX	102%	94%	91%	93%	110%	101%	99%	108%
<b>Average</b>	<b>5.094</b>	<b>4.385</b>	<b>3.806</b>	<b>2.159</b>	<b>2.544</b>	<b>2.693</b>	<b>3.031</b>	<b>2.859</b>

*Variety > 5% above site mean.*

## Canola Variety Trials

Since 2011 SEPWA have included 157 canola varieties in variety trials throughout the Esperance Port Zone (EPZ) and has included 2 conventional, 26 Clearfield, 62 Triazine, 51 Roundup Ready and 16 dual (triazine, clearfield and roundup ready) herbicide canola varieties.

<b>Canola Yields and Quality data for SEPWA Trials 2011-2023</b>					
<b>Year x Area</b>	<b>Yield (t/ha)</b>	<b>Protein %</b>	<b>Oil %</b>	<b>Economic Ranking</b>	<b>Kg/mm</b>
<b>High Rainfall - Sandplain</b>	<b>1.929</b>	<b>21.0</b>	<b>45.4</b>	<b>\$1,163</b>	<b>5.7</b>
2011	1.828	19.5	43.3	\$899	5.9
2012	1.623	21.2	44.8	\$862	7.3
2013	1.191	20.7	44.0	\$573	2.7
2014	2.140	23.2	45.1	\$1,032	6.1
2015	1.126	21.0	46.2	\$534	3.3
2017	2.361	22.2	45.4	\$1,244	7.0
2018	1.628	22.3	45.5	\$792	4.8
2019	2.299	23.7	44.5	\$1,287	6.6
2020	2.724	21.9	45.8	\$1,776	9.7
2021	2.309	20.7	47.9	\$1,972	5.2
2022	1.865	18.8	47.9	\$1,582	3.4
2023	2.442	20.8	46.3	\$1,536	7.9
<b>Medium Rainfall - Mallee</b>	<b>1.823</b>	<b>20.7</b>	<b>45.1</b>	<b>\$1,007</b>	<b>6.7</b>
2011	1.536	20.0	42.6	\$760	5.3
2012	2.128	22.1	42.7	\$1,140	9.1
2013	1.773	19.5	45.1	\$884	5.1
2014	1.383	21.9	42.8	\$635	3.7
2015	1.725	20.7	46.1	\$829	5.4
2016	2.089	18.9	47.5	\$1,070	5.5
2017	1.629	17.7	48.6	\$894	5.7
2018	1.654	20.6	47.2	\$831	8.2
2019	1.664	21.8	47.3	\$919	11.3
2020	1.970	22.2	44.6	\$1,221	7.3
2021	2.014	19.4	48.5	\$1,588	8.3
2022	2.100	19.1	48.1	\$1,651	6.8
2023	2.359	22.1	42.5	\$1,535	8.1
<b>Low Rainfall - Mallee</b>	<b>1.235</b>	<b>22.4</b>	<b>43.7</b>	<b>\$730</b>	<b>5.5</b>
2011	0.782	22.3	40.5	\$348	3.5
2012	0.848	24.7	40.7	\$422	5.3
2013	1.432	19.7	47.3	\$735	5.8
2014	1.064	22.0	43.8	\$477	3.9
2015	1.435	21.0	44.1	\$724	5.1
2016	1.548	19.1	48.5	\$862	5.9
2017	1.215	20.3	47.0	\$672	5.5
2018	0.847	22.1	45.9	\$358	4.8
2019	0.794	26.1	42.0	\$376	3.8
2020	1.331	24.1	41.7	\$809	8.0
2021	1.814	24.5	42.1	\$1,507	7.1
2022	1.903	18.6	46.4	\$1,803	5.8
2023	1.511	24.4	40.2	\$921	7.9
<b>Average</b>	<b>1.643</b>	<b>21.4</b>	<b>44.7</b>	<b>\$955</b>	<b>6.0</b>



<b>Canola Yields x Herbicide Tolerant for SEPWA Trials 2011-2023</b>					
<b>Region x Trait</b>	<b>Yield (t/ha)</b>	<b>Protein %</b>	<b>Oil %</b>	<b>Economic Ranking</b>	<b>Yield (kg/mm)</b>
<b>High Rainfall - Sandplain</b>	<b>1.929</b>	<b>21.0</b>	<b>45.4</b>	<b>\$1,163</b>	<b>5.7</b>
Clearfield	1.999	21.1	45.4	\$1,199	5.5
Conventional	1.816	20.1	43.9	\$1,006	7.3
Roundup Ready	1.916	20.7	45.1	\$1,037	5.9
Triazine	1.870	21.4	45.6	\$1,180	5.3
Dual	2.279	21.0	47.3	\$1,659	6.1
<b>Medium Rainfall - Mallee</b>	<b>1.823</b>	<b>20.7</b>	<b>45.1</b>	<b>\$1,007</b>	<b>6.7</b>
Clearfield	1.671	20.3	41.7	\$813	5.4
Conventional	2.151	20.0	42.6	\$1,189	7.5
Roundup Ready	1.873	20.5	46.2	\$993	7.2
Triazine	1.750	21.0	44.7	\$1,015	6.1
Dual	1.974	21.1	47.1	\$1,283	8.3
<b>Low Rainfall - Mallee</b>	<b>1.235</b>	<b>22.4</b>	<b>43.7</b>	<b>\$730</b>	<b>5.5</b>
Clearfield	0.789	22.4	42.0	\$350	4.1
Roundup Ready	2.056	20.4	47.9	\$968	7.8
Triazine	1.201	22.5	43.6	\$718	5.4
Dual	1.687	22.8	42.0	\$1,239	7.2
<b>Grand Total</b>	<b>1.643</b>	<b>21.4</b>	<b>44.7</b>	<b>\$955</b>	<b>6.0</b>

Please note that DUAL varieties have only been included in SEPWA Canola Variety trials with first variety in 2016 and with further introductions in 2019 to 2023.

## 2023 Canola Yield and Quality Data

This year in 2023 there are nine (9) Canola sites in the EPZ including six (6) Triazine Tolerant sites, two (2) Roundup Ready sites and one (1) Clearfield canola trial.

<b>Species</b>	<b>Locality</b>	<b>Trading Name</b>	<b>Soil Type</b>
Canola (Triazine)	Beaumont	Yupiri - WA	Shallow Duplex
Canola (Triazine)	Grass Patch	Bowman Farming	Clay/Loam
Canola (Triazine)	Cascade	Ayers Family Farming	Duplex
Canola (Triazine)	Condingup	Warakirri	Sand over Gravel
Canola (Triazine)	Wittenoom Hills	Mt Burdett Farming	Duplex - sand over clay
Canola (Triazine)	Altor Ag	Ravensthorpe	Duplex Clay/sand over clay
Canola (Clearfield)	Condingup	Gunnister Farm	Sand
Canola (RR Ready)	Condingup	Kyarran Farming Co	Duplex - Sandplain
Canola (RR Ready)	Hopetoun	Redman Farms	Sandy Gravel

Please note that Kyarran Farming Co (RR Canola) site at Condingup was not harvested due to waterlogging.

## Roundup Ready® Canola

There were TWO (2) Roundup Ready® canola varieties in the Esperance Port Zone at Condingup and Wittenoom Hills. Roundup Ready® canola varieties were provided from various breeding programs including Bayer CropScience, Pioneer Hi-Bred Aust Pty Ltd, Nuseed and Advanta Seeds.

<b>ROUNDUP - READY</b>		<b>ROUNDUP - READY</b>	
<b>Company</b>	<b>Variety</b>	<b>Company</b>	<b>Variety</b>
Pioneer	43Y30 RR	Advanta	Hyola Garrison XC
Pioneer	44Y27 RR	NuSeed	Hunter TF
Pioneer	45Y28 RR	NuSeed	Eagle TF
BASF	InVigor LR 4540 - RR	SeedNet	DG Hotham TF
BASF	InVigor R 4022P- RR	SeedNet	DG Bindo TF
BASF	InVigor R 4520P- RR		

In the 2023 Roundup Ready variety trials new varieties include from two (2) from BASF, InVigor LR 4540 P is an early-mid (4.5) maturity Roundup Ready® hybrid variety with even better yield potential than InVigor R 4022 P with the option of adding Liberty® to the in-crop spray program if and when it's needed. Plant height is compact with PodGuard and with good vigour and oil. Blackleg rating: R (with ILeVO®). Blackleg group: B. InVigor R 4022 P is an early-mid (4) maturity Roundup Ready® hybrid variety combines BASF's unique PodGuard® trait technology and TruFlex® with Roundup Ready® technology. InVigor R 4022 P is medium plant height with good vigour and oil. Blackleg rating: R (with ILeVO®). Blackleg group: ABC

From SeedNet, DG Hotham TF is a mid-season Roundup Ready® hybrid variety with very good seedling vigour, with a medium – tall plant type and good oil content and is an alternate to Nuseed Raptor TF, InVigour R 4520P, Nuseed Condor TF and 45Y28RR. Blackleg Rating R (Bare Seed). Blackleg Grouping ACHNEW

Nuseed have two (2) new varieties, Hunter TF is early-mid maturity TruFlex® hybrid canola with adaptability from low to high rainfall regions and good pod shatter tolerance. It has excellent early vigour and good biomass with a medium plant type. Suitable for medium – quick growing regions. Alternative to Pioneer® 44Y27 RR, InVigor® R 4022P, Hyola® 410XX Blackleg rating\* R–MR. Blackleg group: AB. The other variety is Eagle TF is a mid-maturity TruFlex® hybrid canola suitable for mid to high production zones. It has excellent early vigour and good biomass and delivers an improved yield and oil content. Eagle TF has a tall plant type with good seedling vigour and is an alternative to Nuseed Condor TF, Pioneer® 45Y28 RR, InVigor® R 4022P Blackleg rating\* R–MR. Blackleg group: ABD.

Other Varieties in the Roundup include 43Y30 RR, 44Y27 RR, 44Y30 RR and InVigor R 4520P- RR.

Unfortunately, yield data was only available from the Hopetoun site due to the Condungup site suffering from waterlogging resulting in poor yield data. Results for the Hopetown site is below.

Variety	Trait	Maturity	Yield (t/ha)	% InVigor R 4520P- RR	Protein %	Oil %	Economic Ranking
Nuseed Eagle TF	TruFlex® Hybrid	Mid-season	2.944	95%	22.0	46.5	\$ 1,891
DG Bindo TF	TruFlex® Hybrid	Early - Mid season	3.038	98%	21.2	46.7	\$ 1,909
<b>InVigor R 4520P- RR</b>	<b>RR Hybrid</b>	<b>Early - Mid season</b>	<b>3.096</b>	<b>100%</b>	<b>21.2</b>	<b>43.6</b>	<b>\$ 1,917</b>
44Y27 RR	RR Hybrid	Early - Mid season	3.139	101%	21.9	44.2	\$ 1,950
DG Hotham TF	RR Hybrid	Mid-season	3.180	103%	22.4	46.4	\$ 2,000
InVigor R 4022P- RR	RR Hybrid	Early - Mid season	3.206	104%	22.7	46.3	\$ 2,015
45Y28 RR	RR Hybrid	Mid-season	3.227	104%	21.4	47.6	\$ 2,042
NCH20Q733 Hunter TF	TruFlex® Hybrid	Early - Mid season	3.289	106%	22.4	47.4	\$ 2,050
44Y30 RR	RR Hybrid	Early - Mid season	3.369	109%	22.1	45.7	\$ 2,116
InVigor LR 4540 - RR	RR Hybrid + Liberty®	Early - Mid season	3.413	110%	21.4	45.3	\$ 2,111

## Triazine Tolerant Canola

In 2023 there were FIVE (5) Triazine Tolerant canola trails in the Esperance Port Zone and some of the new or latest release varieties included.

TRIAZINE		TRIAZINE	
Company	Variety	Company	Variety
NuSeed	HyTTec Trophy	SeedNet	DG Torrens TT
NuSeed	HyTTec Trident	SeedNet	DG Bidgee TT
NuSeed	HyTTec Velocity	Pioneer	PY520TC
NuSeed	HyTTec Trifecta	AGT	Bandit TT
NuSeed	ATR TM Bonito	AGT	Renegade
SeedForce	SF Dynatron TT	BASF	InVigor T 4510 TT
SeedForce	RGT Capacity TT	BASF	InVigor T 4530 TT
SeedForce	SF Dynatron TT	Advanta	Hyola Blazer TT
SeedForce	RGT Baseline	Pioneer	PY520TC
Advanta	Hyola Blazer TT		

New Triazine varieties include HyTTec Velocity an early maturing line and the fastest variety in the HyTTec family which has a compact plant height and improved pod shatter genetics it is showing an improved harvestability over other lines and possesses good early vigour for strong establishment and increased weed competition. HyTTec Velocity is suited to quick growing canola regions. Blackleg rating MR-MS.

PY520TC from Pioneer is a mid-maturing hybrid variety combining the triazine tolerant & Clearfield® herbicide tolerances add greater flexibility to weed management strategies and has exceptional top end yield potential and oil content into a nicely rounded agronomic package. PY520TC has shown outstanding performance in long season & high yielding locations with exceptional early growth also helps drive excellent crop competition to help further reduce weed seed set. Blackleg rating: R\*.

From SeedForce are 2 new varieties RGT Baseline is a mid-long season maturing hybrid canola for medium to high rainfall areas and has excellent seedling vigour with moderate crop height and high oil content. Blackleg Resistance MR-MS (Bare), R (Ilevo/Saltro) Resistance Group B. The other variety is SF Dynatron TT is a mid-maturing hybrid canola with medium – tall plant type and has excellent seedling vigour and high oil content and Blackleg Resistance – MR-MS (bare), Resistance Group BC.

Australian Grain Technology (AGT) have released two varieties Bandit TT is an open pollinated variety which is very quick to flower, similar to ATR Stingray and HyTTec® Trident and is best adapted to lower rainfall and lower yield potential environments and has similar oil content to ATR Stingray. Blackleg rating (R) (with fungicide), MS blackleg rating (without fungicide). Group A blackleg resistance. The other variety is Renegade TT, an open pollinated variety which is very quick to flower, between HyTTec® Trident and HyTTec® Trophy, a little quicker than ATR Bonito and best performs under medium yield potential conditions with competitive profitability with oil content higher than ATR Stingray and similar to HyTTec® Trident. Blackleg rating (R) (with fungicide), MR-MS blackleg rating (without fungicide). Group A blackleg resistance.

SeedNet have two varieties, DG Bidgee TT is a open pollinated variety with a mid-maturity, with good seedling vigour and a medium plant height. Oil content is moderate (slightly lower than ATR Bonito). Blackleg Rating R (Bare seed); Blackleg Grouping H. The other variety is DG Torrens TT, an open pollinated variety with an early – mid maturity, with good seedling vigour and a medium plant height. Oil content is moderate (slightly lower than ATR Bonito). Blackleg Rating R-MR (Bare seed); Blackleg Grouping H.

Other Varieties include HyTTec Trophy, HyTTec Trident, HyTTec Trifecta, ATR TM Bonito, RGT Capacity TT, Hyola Blazer TT, InVigor T 4510 TT and InVigor T 4530 TT.

2023 SEPWA Triazine Tolerant (TT) Canola Variety Trials							
Variety	Trait	Maturity	Yield (t/ha)	%Site mean	Protein %	Oil %	Economic Ranking
<b>High Rainfall - Sandplain</b>							
<b>Condingup</b>			<b>1.790</b>	<b>100%</b>	<b>20.3</b>	<b>46.5</b>	<b>\$1,171</b>
Bandit TT	Triazine, Open	Early	1.138	64%	19.8	45.9	\$778
DG Bidgee TT	Triazine, Open	Early - Early Mid	1.996	112%	20.0	43.8	\$1,341
HyTTec Trifecta	Triazine, Hybrid	Mid - season	1.753	98%	20.6	46.7	\$1,140
HyTTec Trophy	Triazine, Hybrid	Early - Mid	1.562	87%	20.2	46.9	\$1,012
POINEER PY 520	Hybrid Triazine & Clearfield®	Mid - season	1.789	100%	21.2	46.1	\$1,096
RGT Baseline TT	Triazine, Hybrid	Mid - late	1.950	109%	19.5	49.6	\$1,303
RGT Capacity TT	Triazine, Hybrid	Early - Mid	1.882	105%	20.7	46.4	\$1,224
SF Dynatron TT	Triazine, Hybrid	Mid - season	2.248	126%	20.5	46.7	\$1,477
<b>Medium Rainfall - Mallee</b>							
<b>Wittenoom Hills</b>			<b>2.359</b>	<b>100%</b>	<b>22.1</b>	<b>42.5</b>	<b>\$1,535</b>
Blazer TT	Triazine, Hybrid	Early - Mid	2.350	100%	22.5	45.9	\$1,553
DG Bidgee TT	Triazine, Open	Early - Early Mid	2.466	105%	20.4	40.9	\$1,633
DG Torrens TT	Triazine, Open	Early - Mid	2.101	89%	22.0	40.9	\$1,384
HyTTec Trident	Triazine, Hybrid	Early	2.518	107%	20.6	43.5	\$1,642
HyTTec Trifecta	Triazine, Hybrid	Mid - season	2.094	89%	22.8	42.7	\$1,346
HyTTec Trophy	Triazine, Hybrid	Early - Mid	2.472	105%	20.9	43.9	\$1,615
PY520TC	Hybrid Triazine & Clearfield®	Mid - season	2.645	112%	22.8	40.6	\$1,649
Renegade	Triazine, Open	Early - Early Mid	1.991	84%	23.4	41.9	\$1,320
RGT Baseline TT	Triazine, Hybrid	Mid - late	2.456	104%	23.0	43.1	\$1,596
RGT Capacity TT	Triazine, Hybrid	Early - Mid	2.493	106%	23.1	41.8	\$1,608

**2023 SEPWA Triazine Tolerant (TT) Canola Variety Trials**

Variety	Trait	Maturity	Yield (t/ha)	%Site mean	Protein %	Oil %	Economic Ranking
<b>Beaumont</b>			<b>1.931</b>	<b>100%</b>	<b>25.0</b>	<b>39.6</b>	<b>\$1,189</b>
DG Torrens TT	Open Pollinated	Early - Mid	1.672	87%	21.6	42.3	\$1,106
Hyola Blazer TT	Triazine, Hybrid	Early - Mid	1.825	95%	25.9	41.5	\$1,136
HyTTec Trident	Triazine, Hybrid	Early	2.156	112%	23.5	37.2	\$1,317
HyTTec Trifecta	Triazine, Hybrid	Mid - season	1.822	94%	27.4	38.8	\$1,106
HyTTec Trophy	Triazine, Hybrid	Early - Mid	1.972	102%	24.5	39.7	\$1,218
HyTTec Velocity	Triazine, Hybrid	Early	2.028	105%	24.7	43.1	\$1,290
InVigor LT 4530	Liberty + Triazine Tolerant (TT)	Early - Mid	1.925	100%	26.7	37.8	\$1,103
InVigor T 4510- TT	Triazine, Hybrid	Early - Mid	2.043	106%	22.9	40.5	\$1,274
PY520TC	Hybrid Triazine & Clearfield®	Mid - season	1.934	100%	27.6	35.8	\$1,152
<b>Cascade</b>			<b>1.492</b>	<b>100%</b>	<b>22.0</b>	<b>41.5</b>	<b>\$921</b>
HyTTec Trident	Triazine, Hybrid	Early,	1.518	102%	21.1	41.3	\$946
HyTTec Trophy	Triazine, Hybrid	Early - Mid	1.383	93%	23.4	40.4	\$845
HyTTec Velocity	Triazine, Hybrid	Early	1.568	105%	22.0	45.1	\$1,019
PY520TC	Hybrid Triazine & Clearfield®	Mid - season	1.472	99%	22.2	39.1	\$848
<b>Grass Patch</b>			<b>0.939</b>	<b>100%</b>	<b>22.4</b>	<b>42.0</b>	<b>\$552</b>
ATR TM Bonito	Triazine, Open	Early - Early Mid	0.810	86%	22.5	42.2	\$518
Bandit TT	Triazine, Open	Early	0.905	96%	22.6	41.2	\$572
DG Torrens TT	Triazine, Open	Early - Mid	0.805	86%	21.7	42.2	\$515
HyTTec Trident	Triazine, Hybrid	Early	1.047	111%	21.6	41.7	\$609
HyTTec Trophy	Triazine, Hybrid	Early - Mid	1.107	118%	22.3	41.6	\$649
HyTTec Velocity	Triazine, Hybrid	Early	0.976	104%	23.5	42.8	\$572
InVigor LT 4530	Liberty + Triazine Tolerant (TT)	Early - Mid	0.938	100%	22.2	41.3	\$468
InVigor T 4510- TT	Triazine, Hybrid	Early - Mid	0.833	89%	22.3	42.5	\$471
PY520TC	Hybrid Triazine & Clearfield®	Mid - season	1.107	118%	22.2	42.1	\$591
Renegade	Triazine, Open	Early - Early Mid	0.865	92%	22.7	42.4	\$558
<b>Ravensthorpe</b>			<b>1.737</b>	<b>100%</b>	<b>27.3</b>	<b>37.9</b>	<b>\$1,062</b>
Bandit TT	Open Pollinated	Early	1.484	85%	26.6	37.0	\$923
DG Bidgee TT	Open Pollinated	Early - Early Mid	1.552	89%	26.6	35.4	\$953
DG Torrens TT	Open Pollinated	Early - Mid	1.341	77%	26.1	39.0	\$846
Hyola Blazer TT	Triazine, Hybrid	Early - Mid	1.839	106%	29.2	39.5	\$1,125
HyTTec Trident	Triazine, Hybrid	Early	1.917	110%	26.1	37.2	\$1,155
HyTTec Trophy	Triazine, Hybrid	Early - Mid	1.871	108%	26.7	39.6	\$1,147
HyTTec Velocity	Triazine, Hybrid	Early	1.994	115%	29.1	38.0	\$1,215
PY520TC	Hybrid Triazine & Clearfield®	Mid - season	1.958	113%	27.5	37.0	\$1,118
Renegade	Triazine, Open	Early - Early Mid	1.680	97%	28.0	38.8	\$1,075

The comparison of canola (triazine) varieties when compared to yield site average can be seen in the following table for canola triazine tolerant sites in 2023. High-lighted are canola varieties which yielded above 5% of the site mean.

<b>2023 SEPWA Triazine Tolerant (TT) Canola Variety Trials- % of Site Mean</b>						
	<b>High Rainfall - Sandplain</b>	<b>Medium Rainfall - Mallee</b>	<b>Low Rainfall - Mallee</b>			
<b>Variety</b>	<b>Condingup</b>	<b>Wittenoom Hills</b>	<b>Beaumont</b>	<b>Grass Patch</b>	<b>Cascade</b>	<b>Ravensthorpe</b>
ATR TM Bonito				86%		
Bandit TT	64%			96%		85%
Blazer TT		100%				
DG Bidgee TT	112%	105%				89%
DG Torrens TT		89%	87%	86%		77%
Hyola Blazer TT			95%			106%
HyTTec Trident		107%	112%	111%	102%	110%
HyTTec Trifecta	98%	89%	94%			
HyTTec Trophy	87%	105%	102%	118%	93%	108%
HyTTec Velocity			105%	104%	105%	115%
InVigor LT 4530			100%	100%		
InVigor T 4510- TT			106%	89%		
PY520TC	100%	112%	100%	118%	99%	113%
Renegade		84%		92%		97%
RGT Baseline TT	109%	104%				
RGT Capacity TT	105%	106%				
SF Dynatron TT	126%					
<b>Average Yield</b>	<b>1.790</b>	<b>2.359</b>	<b>1.931</b>	<b>0.939</b>	<b>1.492</b>	<b>1.737</b>

*Variety > 5% above site mean.*

## Clearfield® Tolerant Canola

In 2023 there was only ONE Clearfield® Tolerant variety trial located at Condingup, comprising of THREE (3) varieties from Pioneer with the new variety PY421C performing well in both yield and oil content. PY421C CL is an early-mid (4) maturity clearfield hybrid suited to a wide range of environments. Tested for tolerance to imidazolinone herbicides, OnDuty® and Intervix® and with medium – tall plant type (7) and with good plant vigour and shatter tolerance (8) and oil content; Blackleg rating R. Blackleg group: AC.

<b>CLEARFIELD</b>	
<b>Company</b>	<b>Variety</b>
Pioneer	45Y95 CL
Pioneer	44Y94 CL
Pioneer	PY421C

Pioneer® 43Y95CL is a mid-maturity hybrid with similar flowering to 44Y94 CL, suited to medium to high rainfall environments and irrigation. Herbicide tolerance trait: Tested for tolerance to imidazolinone herbicides, OnDuty® and Intervix®.

Pioneer® 44Y94CL is an early mid (4) maturity, displaying excellent adaptability. Ideally suited to low to medium rainfall growing zones.

<b>Variety</b>	<b>Trait</b>	<b>Maturity</b>	<b>Yield (t/ha)</b>	<b>% of Pioneer® 44Y94CL</b>	<b>Protein %</b>	<b>Oil %</b>	<b>Economic Ranking</b>
Pioneer® 44Y94CL	Clearfield, Hybrid	Early - Mid	2.022	100%	18.9	46.9	\$1,320
Pioneer® 45Y95CL	Clearfield, Hybrid	Mid-Season	2.040	101%	21.7	44.2	\$1,305
Pioneer® PY421C	Clearfield, Hybrid	Early - Mid	2.347	116%	19.0	47.8	\$1,551

## CBH - quality testing

CBH as a part of their Platinum Sponsorship with SEPWA provide quality testing for all SEPWA variety trials each year and in 2023 there were 260 samples of wheat, barley, and canola crops sampled as part of the SEPWA variety trials. These results are invaluable to the final outcomes of SEPWA Variety trials.

2023 SEPWA TRIAL - CBH Samples × Species				
Species	High Rainfall - Sandplain	Medium Rainfall - Mallee	Low Rainfall - Mallee	Total
Barley	12	10	52	74
Wheat	35	19	51	105
Canola	26	11	36	73
Barley			8	8
<b>Total</b>	<b>73</b>	<b>40</b>	<b>147</b>	<b>260</b>

2011-23 SEPWA TRIALS - CBH Samples × Species														
Species	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Barley	90	80	125	85	58	97	80	62	106	111	77	111	74	1156
Wheat	135	107	132	141	123	92	102	105	133	122	145	75	105	1517
LS Wheat						30	15	19	24	29	16			133
Canola	109	88	96	90	106	53	44	45	103	92	69	77	73	1045
Oats						21	27	25	7					80
Field Pea							4	5	8	15	8	7		47
Lupins							4		7	8				19
Faba Bean									3	3				6
Lentil									13	24	5			42
Chickpea										15				15
Lentil												10		10
Barley													8	8
<b>Grand Total</b>	<b>334</b>	<b>275</b>	<b>353</b>	<b>316</b>	<b>287</b>	<b>293</b>	<b>276</b>	<b>261</b>	<b>404</b>	<b>419</b>	<b>320</b>	<b>280</b>	<b>260</b>	<b>4078</b>

All SEPWA trial results are now posted at the SEPWA web site at [www.sepwa.org.au](http://www.sepwa.org.au) and include statistical analysis on yield, sowing dates and seeding rates for each of the SEPWA Variety trials, should you have any problems, please contact Michelle Hadley on 0447 908 311 or e-mail [eo@sepwa.org.au](mailto:eo@sepwa.org.au)

For further information about the SEPWA trials, contact SEPWA Trials Co-ordinator Bill Sharp on 0428 711375.