

# Welfare and production ASBVs sorted by fibre diameter and wrinkle

There are 1,748 sires with 2020 drop MERINOSELECT progeny with a breech trait ASBV. Table 1 opposite groups these sires into six fibre diameter ASBV categories from less than -3.0 to greater than +1.0, based on the 7th of June 2022 MERINOSELECT run.

As the six fibre diameter ASBV ranges increase from less than -3.0 to greater than +1.0, the average wrinkle ASBV falls from +0.6 to -0.9. Also, as the six fibre diameter ASBV ranges increase, so does staple strength, fat, muscle, body weight, worm resistance, weaning rate; with dags and fibre diameter CV decreasing.

The table also groups the sires in each of the six fibre diameter categories into 20 percentile ranges on wrinkle. Sires in the 0-20% range have the lowest wrinkle, sires in the 81-100% the highest.

The 'less than 3 micron' category only has 55 sires in it and the 'greater than 1 micron' only 17 sires; care is also needed with the low numbers of sires within each of these wrinkle percentile ranges.

The other micron categories have from 185 to 630 sires in total and from 37 to 126 sires in each wrinkle percentile range.

Within most fibre diameter categories, as wrinkle increases, so does breech cover, fleece weight, staple strength, along with the relevant indexes. Muscle and fat decreases.

These are average statistics across many ram breeders, but the table does show the challenges ahead to breed low diameter, low breech wrinkle, high indexing Merinos.

Individual ram sellers will have different ASBV performance to the average and many ram breeders are pushing the boundaries, breeding rams with lower fibre diameter, lower wrinkle, higher fleece

weight, higher weaning rate and higher indexes than these averages.

Once a ram buyer chooses their preferred fibre diameter and wrinkle ASBV, the table does provide indicative ASBVs for a range of other key welfare and productivity traits, and where ram buyers might also push the boundaries. **B**

## More information

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## Merino Superior Sires No 28 released

Results from 11 Merino Sire Evaluation sites operating around Australia, detailing the measured and visual performance of close to 400 of Australia's leading Merino sires, are available in the latest version of Merino Superior Sires.

Published annually by the Australian Merino Sire Evaluation Association (AMSEA), the current Merino Superior Sires is the 28th edition of this long running and sought-after industry resource.

Merino Superior Sires publishes Australian Sheep Breeding Values (ASBVs) for a wide range of both measured and visually classed traits that are collected as a part of the rigorous and independent assessment program that AMSEA oversees through its network of industry managed sites. In addition, an independent Classer's Grade is also reported giving users an insight into the conformation and wool quality traits that is not expressed through an ASBV.

The current edition of Merino Superior Sires includes, for the first time, results from the Dohne trial that is hosted by the Holt family at 'Coonong Station', near Urana in the Riverina region of NSW. This is an exciting development for Merino Sire Evaluation resulting in Dohne, Merino and Poll Merino sires all being directly compared to each other.

Also available this year, via the Merino Superior Sires website, is a report that details the results of the Top 20 highly used sires that have been entered in Merino Sire Evaluation. The Late Fleece Rot trait has been added for the



Merino Superior Sires No 28 is available for download at [www.merinosuperiorsires.com.au](http://www.merinosuperiorsires.com.au) or in hard copy by contacting [merinosuperiorsires@bcsagribusiness.com.au](mailto:merinosuperiorsires@bcsagribusiness.com.au)

first time this year. Together, the Top 20 sires have contributed more than 44,000 progeny to the MERINOSELECT database and no doubt many more in flocks that are not recorded in MERINOSELECT. The results show the leading Merino Sire Evaluation sires that breeders have been using over the past five years. **B**

## More information

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**Table 1. The performance of 1,748 MERINOSELECT sires with 2020 drop progeny with breech wrinkle ASBVs, grouped by fibre diameter ASBVs and wrinkle percentiles**

FD ASBV Range	No of sires	EBWR Score	LDAG Score	EBCOV Score	YGFW %	AGFW %	YCFW %	ACFW %	YFD Micron	YDCV %	YSS N/Ktex	YEMD mm	YFAT mm	YWT kg	YWEC %	WR Lambs	DP+ Index	MP+ Index	FP+ Index
<b>Sires &lt;-3 FD ASBV, Indicator adult micron 15-16</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	11	0.1	0.0	0.2	9	3	12	8	-3.2	-0.1	-2.3	0.0	-0.3	3.2	1	0.05	159	162	159
20-40%	11	0.4	0.0	0.2	13	7	15	11	-3.3	-0.4	-1.6	-0.2	-0.2	1.4	-21	0.02	152	163	164
41-60%	11	0.5	0.1	0.2	14	8	16	13	-3.4	-0.6	-1.3	-0.4	-0.3	0.7	-2	0.02	154	168	168
61-80%	11	0.8	0.0	0.1	15	11	17	16	-3.4	-0.7	-0.7	-0.7	-1.0	1.2	8	-0.08	151	168	168
81-100%	11	1.1	0.1	0.2	19	15	19	19	-3.5	-0.4	-0.7	-0.9	-0.9	0.8	8	-0.10	155	174	173
<b>Sires &lt;-3 FD ASBV ave</b>	<b>55</b>	<b>0.6</b>	<b>0.0</b>	<b>0.2</b>	<b>14</b>	<b>9</b>	<b>16</b>	<b>13</b>	<b>-3.4</b>	<b>-0.4</b>	<b>-1.3</b>	<b>-0.4</b>	<b>-0.5</b>	<b>1.5</b>	<b>-1</b>	<b>-0.02</b>	<b>155</b>	<b>167</b>	<b>166</b>
<b>Sires -2 to -3 FD ASBV, Indicator adult micron 16-17</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	52	-0.5	-0.1	-0.1	10	4	13	9	-2.3	-1.0	-1.0	0.3	0.1	5.3	-10	0.06	157	157	151
20-40%	52	0.0	0.0	0.0	17	13	19	17	-2.4	-0.3	-1.8	-0.3	-0.5	5.2	6	0.02	162	166	157
41-60%	52	0.3	0.1	0.0	20	14	23	19	-2.3	-0.4	-1.0	-0.4	-0.5	5.3	10	0.03	166	173	161
61-80%	52	0.6	0.0	0.2	19	13	22	19	-2.4	-0.5	-0.9	-0.6	-0.6	3.6	11	0.01	159	169	161
81-100%	52	1.0	0.1	0.3	22	18	24	23	-2.4	-0.3	-0.1	-0.9	-0.9	2.7	17	-0.02	160	174	166
<b>Sires -2 to -3 FD ASBV ave</b>	<b>260</b>	<b>0.3</b>	<b>0.0</b>	<b>0.1</b>	<b>18</b>	<b>12</b>	<b>20</b>	<b>18</b>	<b>-2.4</b>	<b>-0.5</b>	<b>-1.0</b>	<b>-0.4</b>	<b>-0.5</b>	<b>4.4</b>	<b>7</b>	<b>0.02</b>	<b>161</b>	<b>168</b>	<b>159</b>
<b>Sires -1 to -2 FD ASBV, Indicator adult micron 17-18</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	126	-0.8	-0.1	-0.2	13	6	15	11	-1.4	-1.3	-0.3	0.7	0.4	7.0	-9	0.07	158	153	142
20-40%	126	-0.4	0.0	-0.1	17	11	20	17	-1.4	-0.9	-0.1	0.5	0.0	7.0	-6	0.07	168	163	150
41-60%	126	-0.1	0.0	0.0	20	13	23	19	-1.4	-0.6	0.0	0.2	-0.2	6.4	1	0.07	168	166	152
61-80%	126	0.2	0.1	0.0	19	14	22	20	-1.5	-0.4	0.0	-0.1	-0.4	5.5	9	0.07	163	165	152
81-100%	126	0.6	0.1	0.2	21	16	24	21	-1.6	-0.4	0.3	-0.4	-0.5	4.3	8	0.02	161	167	155
<b>Sires -1 to -2 FD ASBV ave</b>	<b>630</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>18</b>	<b>12</b>	<b>21</b>	<b>18</b>	<b>-1.5</b>	<b>-0.7</b>	<b>0.0</b>	<b>0.2</b>	<b>-0.1</b>	<b>6.1</b>	<b>1</b>	<b>0.06</b>	<b>164</b>	<b>163</b>	<b>150</b>
<b>Sires 0 to -1 FD ASBV, indicator adult micron 18-19</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	121	-1.1	-0.2	-0.4	11	3	14	9	-0.5	-1.4	0.4	1.7	1.0	7.9	-19	0.13	163	146	132
20-40%	120	-0.7	-0.1	-0.3	16	10	20	16	-0.5	-1.2	1.4	0.9	0.5	7.4	-8	0.09	165	156	141
41-60%	120	-0.4	-0.1	-0.2	18	11	21	17	-0.5	-1.0	1.4	0.9	0.5	7.2	-12	0.13	171	161	144
61-80%	120	-0.1	0.0	-0.1	21	15	24	21	-0.6	-0.7	1.4	0.4	0.2	6.8	-7	0.12	170	165	148
1-100%	120	0.4	0.1	0.0	23	18	26	24	-0.6	-0.4	1.7	-0.1	-0.3	5.9	3	0.09	166	166	149
<b>Sires 0 to -1 FD ASBV ave</b>	<b>601</b>	<b>-0.4</b>	<b>-0.1</b>	<b>-0.2</b>	<b>18</b>	<b>11</b>	<b>21</b>	<b>17</b>	<b>-0.5</b>	<b>-1.0</b>	<b>1.3</b>	<b>0.8</b>	<b>0.4</b>	<b>7.0</b>	<b>-9</b>	<b>0.11</b>	<b>167</b>	<b>158</b>	<b>143</b>
<b>Sires 1 to 0 FD ASBV, Indicator adult micron 19-20</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	37	-1.3	-0.2	-0.6	12	5	16	12	0.5	-1.3	0.7	2.1	1.4	8.9	-4	0.12	163	140	121
20-40%	37	-0.9	-0.2	-0.5	13	6	16	11	0.3	-1.6	1.3	1.9	1.1	7.7	-19	0.12	161	141	125
41-60%	37	-0.7	-0.2	-0.2	18	11	22	18	0.4	-1.1	2.1	1.4	0.9	8.1	-17	0.18	174	156	137
61-80%	37	-0.4	-0.1	-0.2	19	12	23	20	0.4	-1.2	3.2	1.1	0.7	7.5	-17	0.17	174	159	140
81-100%	37	0.1	-0.1	-0.1	25	17	28	25	0.3	-1.3	4.2	0.7	0.4	7.8	-8	0.20	182	171	149
<b>Sires 1 to 0 FD ASBV ave</b>	<b>185</b>	<b>-0.6</b>	<b>-0.2</b>	<b>-0.3</b>	<b>17</b>	<b>10</b>	<b>21</b>	<b>17</b>	<b>0.4</b>	<b>-1.3</b>	<b>2.3</b>	<b>1.5</b>	<b>0.9</b>	<b>8.0</b>	<b>-13</b>	<b>0.15</b>	<b>171</b>	<b>153</b>	<b>134</b>
<b>Sires &gt;1 FD ASBV, Indicator micron 21-22</b>																			
Wrinkle 20% percentiles low to high wrinkle																			
Min 0-20%	4	-1.4	-0.1	-0.7	8	2	11	9	1.4	-1.4	1.7	2.5	1.8	6.6	-40	0.09	145	119	106
20-40%	3	-1.0	-0.2	-0.4	16	9	21	16	1.3	-1.6	2.1	1.8	1.0	11.3	-10	0.06	158	137	117
41-60%	3	-0.9	-0.1	-0.4	6	-1	11	5	1.2	-1.6	1.6	3.1	1.5	7.5	-18	0.20	161	127	111
61-80%	3	-0.6	-0.1	-0.1	13	8	17	15	1.3	-0.7	3.3	1.5	1.1	5.8	0		156	134	116
81-100%	4	-0.4	-0.2	-0.3	18	10	23	17	1.4	-1.5	3.2	1.7	1.2	9.5	-25	0.19	176	153	131
<b>Sires &gt;1 FD ASBV ave</b>	<b>17</b>	<b>-0.9</b>	<b>-0.1</b>	<b>-0.4</b>	<b>12</b>	<b>6</b>	<b>17</b>	<b>13</b>	<b>1.3</b>	<b>-1.4</b>	<b>2.4</b>	<b>2.1</b>	<b>1.3</b>	<b>8.1</b>	<b>-20</b>	<b>0.12</b>	<b>159</b>	<b>134</b>	<b>117</b>
<b>Sire total &amp; aves</b>	<b>1748</b>	<b>-0.2</b>	<b>0.0</b>	<b>-0.1</b>	<b>18</b>	<b>11</b>	<b>21</b>	<b>17</b>	<b>-1.1</b>	<b>-0.8</b>	<b>0.5</b>	<b>0.4</b>	<b>0.1</b>	<b>6.2</b>	<b>-3</b>	<b>0.08</b>	<b>165</b>	<b>161</b>	<b>147</b>
<b>All 2020 progeny</b>	<b>Aust &amp; NZ</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>14</b>	<b>9</b>	<b>17</b>	<b>14</b>	<b>-1.0</b>	<b>-0.9</b>	<b>0.7</b>	<b>0.6</b>	<b>0.2</b>	<b>5.4</b>	<b>-15</b>	<b>0.07</b>	<b>156</b>	<b>152</b>	<b>141</b>

The indicative average phenotypic adult ewe fibre diameters are based on a range of AWI trials. Breeders need to validate their ASBV and phenotypic micron for their country and management program. Analysis based on MERINOSLECT data run date 7th June 2022

Abbreviations: EBWR (Early Breech Wrinkle), LDAG (Late Dag), EBCOV (Early Breech Cover), YGFW (Yearling Greasy Fleece Weight), AGFW (Adult Greasy Fleece Weight), YCFW (Yearling Clean Fleece Weight), ACFW (Adult Clean Fleece Weight), YFD (Yearling Fibre Diameter), YDCV (Yearling Diameter C of V), YSS (Yearling Staple Strength), YEMD (Yearling Eye Muscle Depth), YFAT (Yearling FAT), YWT (Yearling Body Weight), YWEC (Yearling Worm Egg Count), WR (Weaning Rate), DP+ (Dual Purpose Production Plus Index), MP+ (Merino Production Plus Index), FP+ (Fibre Production Plus Index)