



COTTON QUALITY REPORT

QUALITY CONTROL DIVISION



2023-2024 Production Season

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Crop Summary

The initial testing for the 2023- 2024 local cotton production season began on 19th of April 2024, and the last samples were tested on the 18th of November 2024. A total of 90 074 bales were produced and tested in this period.

Grades

Visual grade classified manually by cotton classers according to the USDA upland cotton grading standards.

Table 1: Summary of the grades achieved for the entire crop.

Grade	Number of bales	Percentage
Good Middling (GM)	19 654	21.8%
Strict Middling (SM)	23 333	25.9%
Middling (MIDD)	33 090	36.7%
Strict Low Middling (SLM)	10 663	11.8%
Low Middling (LM)	1 248	1.4%
Strict Good Ordinary (SGO)	2 086	2.3%
Total	90 074	100%

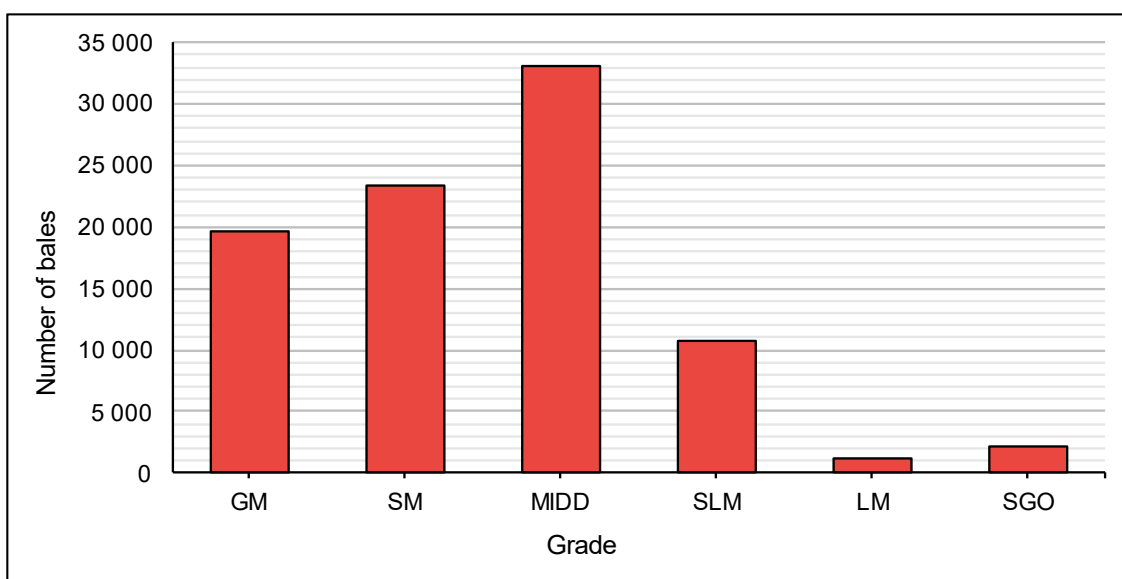


Figure 1: Distribution of the entire crop by grade.

Length

A measure of the Upper Half Mean Length (UHML) of fibres within a sample. The UHML of a sample corresponds to the classer's staple length (Uster 2008).

Table 2: Summary of the length achieved for the entire crop.

Length	Description	Number of bales	Percentage
0,0 - 0,97	less than 1"	735	0.8%
0,98 - 1,04	1 1/32"	7 720	8.6%
1,05 - 1,07	1 1/16"	6 705	7.4%
1,08 - 1,10	1 3/32"	6 399	7.1%
1,11 - 1,13	1 1/8"	11 215	12.5%
1,14 - 1,16	1 5/32"	19 616	21.8%
1,17 - 1,40	1 3/16" and greater	37 684	41.8%
Total		90 074	100%

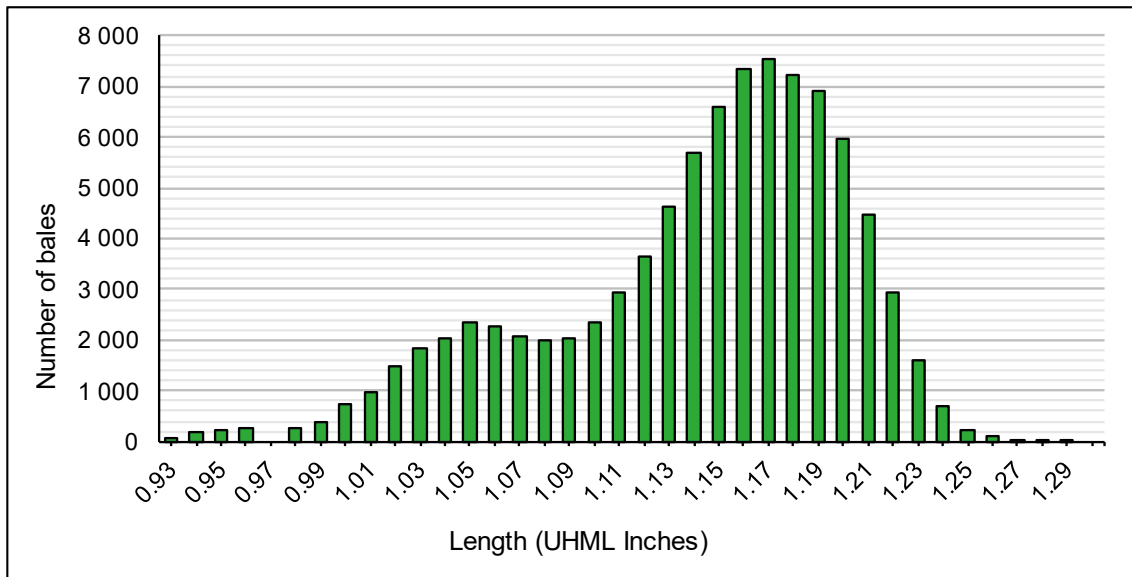


Figure 2: Distribution of the entire crop by length.

Strength

The tensile force required to break a bundle of cotton fibres within a sample (Uster 2008). Strength values above 28,0 grams/tex are preferred by spinners and other purchasers (shown in Figure 3).

Table 3: Summary of the strength achieved for the entire crop.

Strength	Description	Number of bales	Percentage
0,0 - 21,99	Very weak	29	0.0%
22,0 - 24,49	Weak	859	1.0%
24,5 - 27,99	Medium	14 289	15.9%
28,0 - 31,99	Strong	66 075	73.4%
32,0 - 45,00	Very strong	8 822	9.8%
Total		90 074	100%

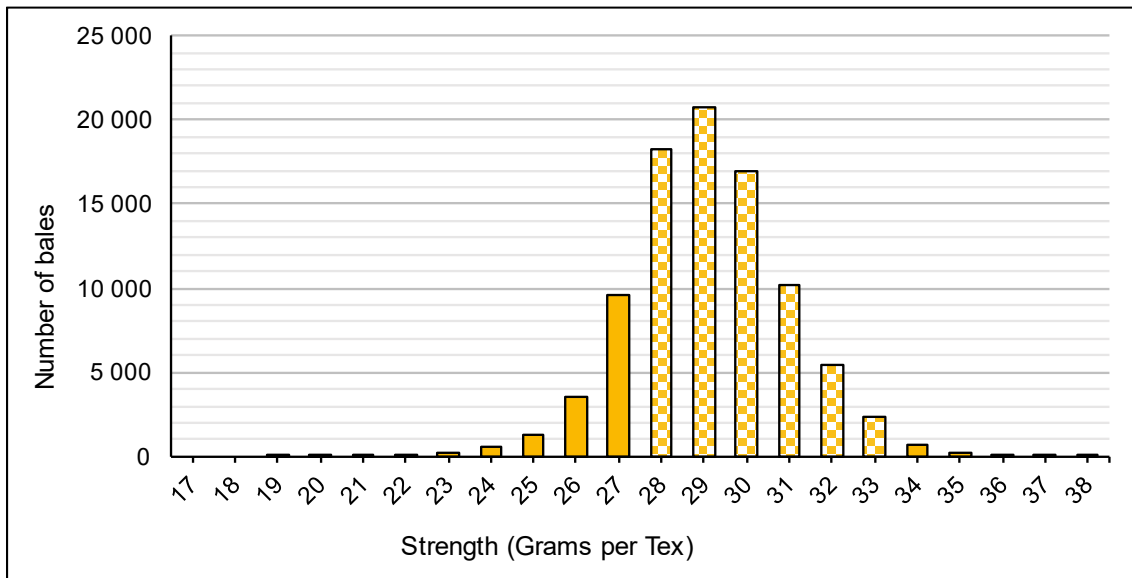


Figure 3: Distribution of the entire crop by strength.

Micronaire

A description of the thickness of individual cotton fibres within a sample. Measured by passing air through a sample of constant weight and measuring the drop in air pressure (Uster 2008). Micronaire values between 3,5 and 4,9 are acceptable. However, the preferred micronaire value is between 3,8 and 4,2 (shown in Figure 4).

Table 4: Summary of the micronaire achieved for the entire crop.

Micronaire	Description	Number of bales	Percentage
0,0 - 2,99	Very fine	800	0.9%
3,0 - 3,79	Fine	13 531	15.0%
3,8 - 4,79	Medium	67 267	74.7%
4,8 - 5,4	Coarse	8 476	9.4%
Total		90 074	100%

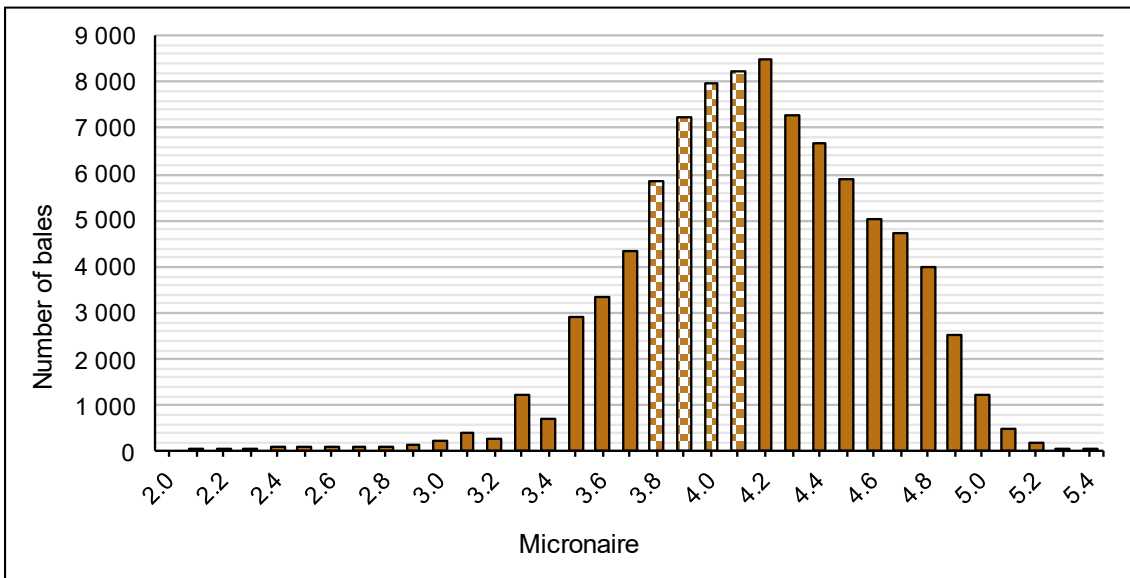


Figure 4: Distribution of the entire crop by micronaire.

Reflectance

Reflectance (Rd) expresses the whiteness of the light that is reflected by the cotton fibres. It is used in conjunction with yellowness (+b) to determine the colour grade of the cotton (Uster 2008).

Table 5: Summary of the reflectance achieved for the entire crop.

Rd	Number of bales	Percentage
0,0 - 67,49	258	0.3%
67,5 - 72,49	3 172	3.5%
72,5 - 74,99	5 600	6.2%
75,0 - 77,49	15 181	16.9%
77,5 - 79,99	29 479	32.7%
80,0 - 82,49	23 298	25.9%
82,5 - 90,0	13 086	14.5%
Total	90 074	100%

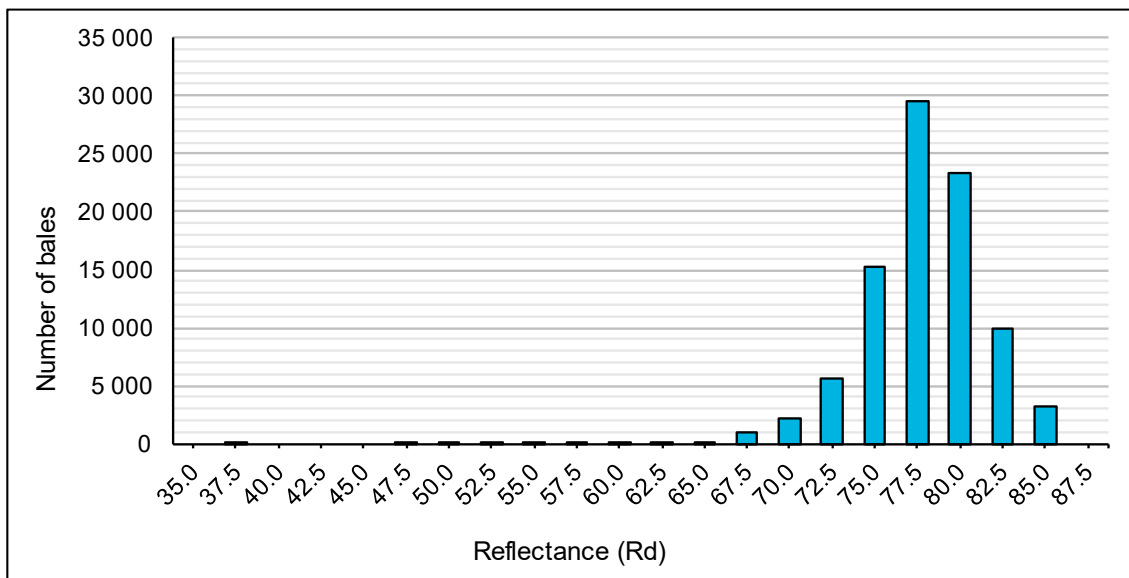


Figure 5: Distribution of the entire crop by reflectance.

Yellowness

Yellowness expresses the yellowness of the light that is reflected by the cotton fibres, the yellowness of the sample is determined by using a yellow filter. It is used in conjunction with the reflectance to determine the colour grade of the cotton (Uster 2008).

Table 6: Summary of the Yellowness achieved for the entire crop.

+ b	Number of bales	Percentage
0,0 - 5,9	489	0.5%
6,0 - 6,9	12 091	13.4%
7,0 - 7,9	44 089	48.9%
8,0 - 8,9	22 841	25.4%
9,0 - 9,9	8 837	9.8%
10,0 - 10,9	1 571	1.7%
11,0 - 12,9	155	0.2%
13,0 - 20,0	1	0.0%
Total	90 074	100%

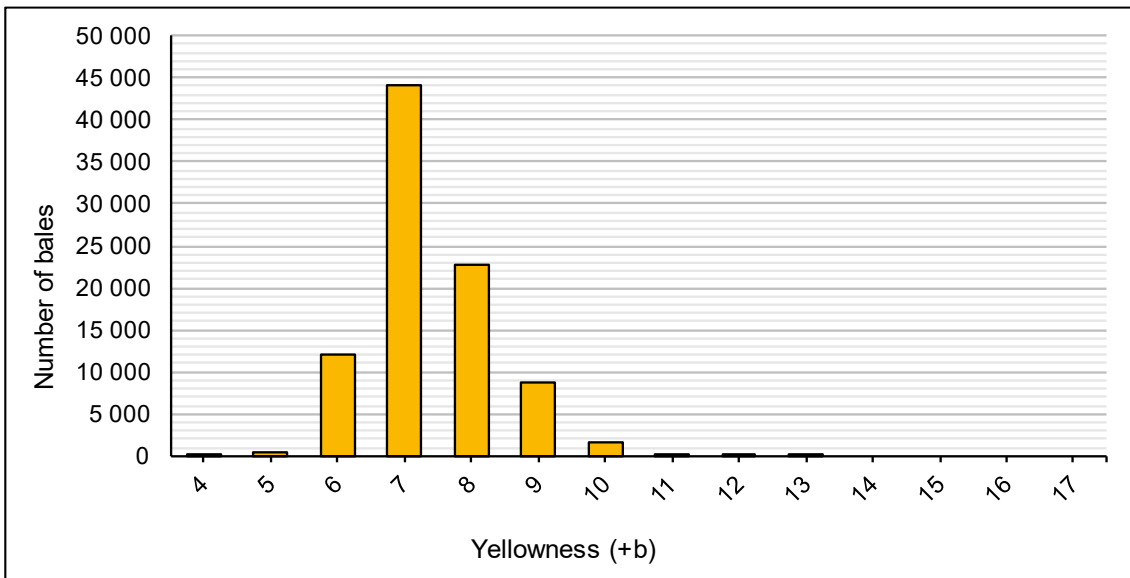


Figure 6: Distribution of the entire crop by yellowness.

Short fibre index

The Short Fibre Index (SFI) is an indication of the number of fibres in percentage that are less than 0.5 inches (12.7 mm) in length (Uster 2008). A lower index value is considered better, SFI of 10,0 or above is considered an issue (shown in Figure 7).

Table 7: Summary of the short fibre index achieved for the entire crop.

SFI	Description	Number of bales	Percentage
0,0 - 5,99	Very low	724	0.8%
6,0 - 9,99	Low	76 912	85.4%
10,0 - 13,99	Medium	12 068	13.4%
14,0 - 17,99	High	366	0.4%
18,0 - 30,00	Very high	4	0.0%
Total		90 074	100%

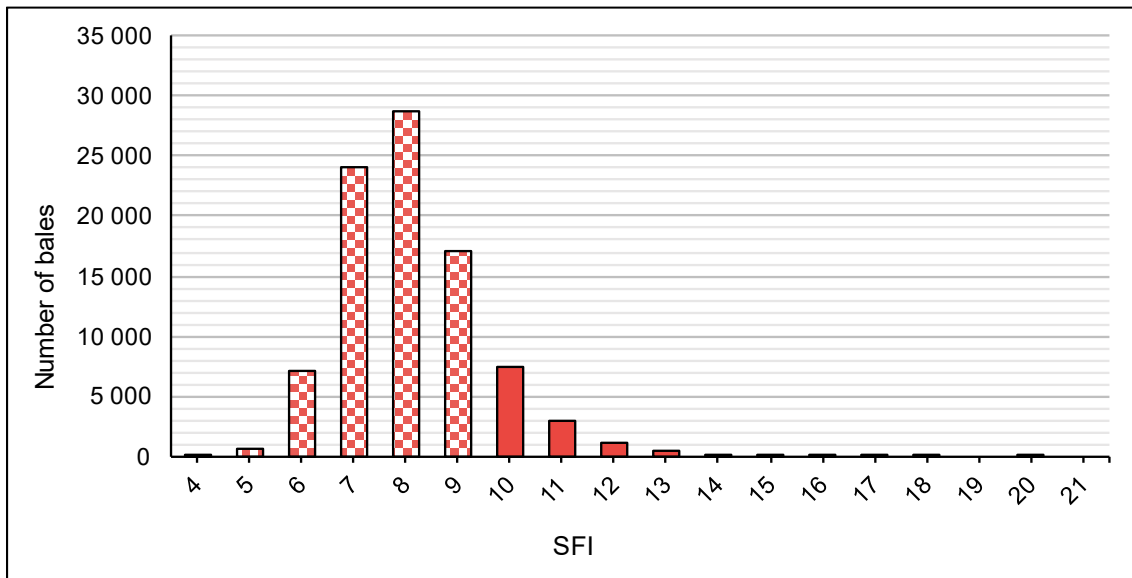


Figure 7: Distribution of the entire crop by short fibre index.

Uniformity

The uniformity (UI) expresses the relationship between the UHML and Mean Length. It is an indication of the distribution of fibre length within samples (Uster 2008). An index value of 80,0 or better is preferable (shown in Figure 8).

Table 8: Summary of the uniformity achieved for the entire crop.

UI	Description	Number of bales	Percentage
0,0 - 76,9	Very low	108	0.1%
77,0 - 80,9	Low	30 909	34.3%
81,0 - 84,9	Medium	59 007	65.5%
85,0 - 89,0	High	50	0.1%
Total		90 074	100%

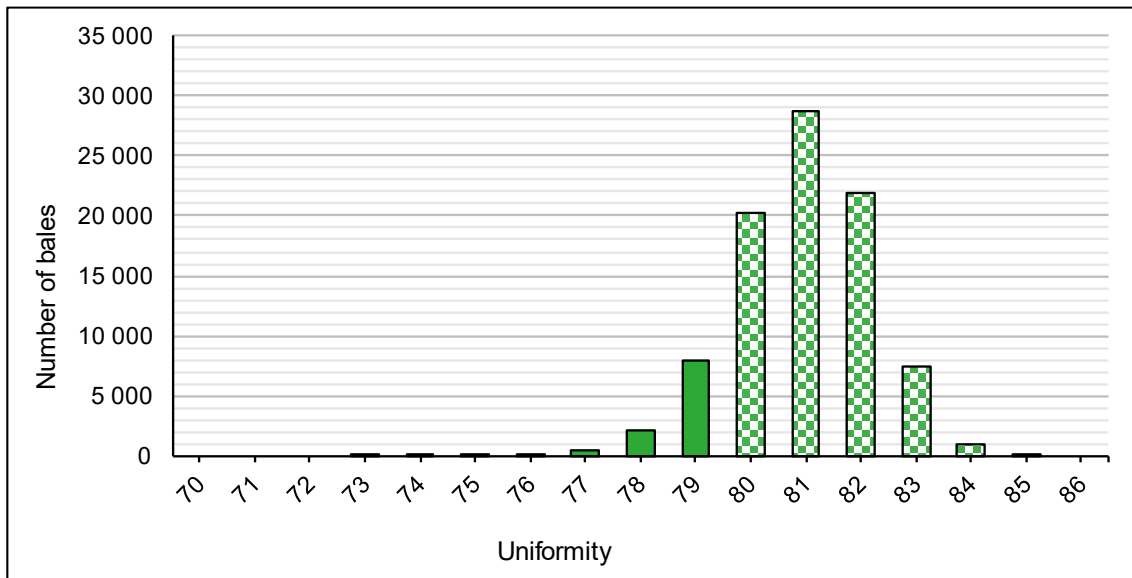


Figure 8: Distribution of the entire crop by uniformity.

Spinning consistency index

The spinning consistency index is a calculation for predicting the spinnability of fibres. It is a calculation that can anticipate yarn strength and spinning potential based on individual HVI measurements (this includes: Strength, Micronaire, Length, Uniformity, Reflectance, and Yellowness). In general, the higher the SCI, the higher the yarn strength and the better the overall fibre spinnability (Uster 2008). An index of 120 or better is preferable (shown in Figure 9).

Table 9: Summary of the spinning consistency index achieved for the entire crop.

SCI	Number of bales	Percentage
0 - 99	1 327	1.5%
100 - 119	15 959	17.7%
120 - 130	29 945	33.2%
131 - 140	30 010	33.3%
141 - 150	11 578	12.9%
151 - 170	1 255	1.4%
Total	90 074	100%

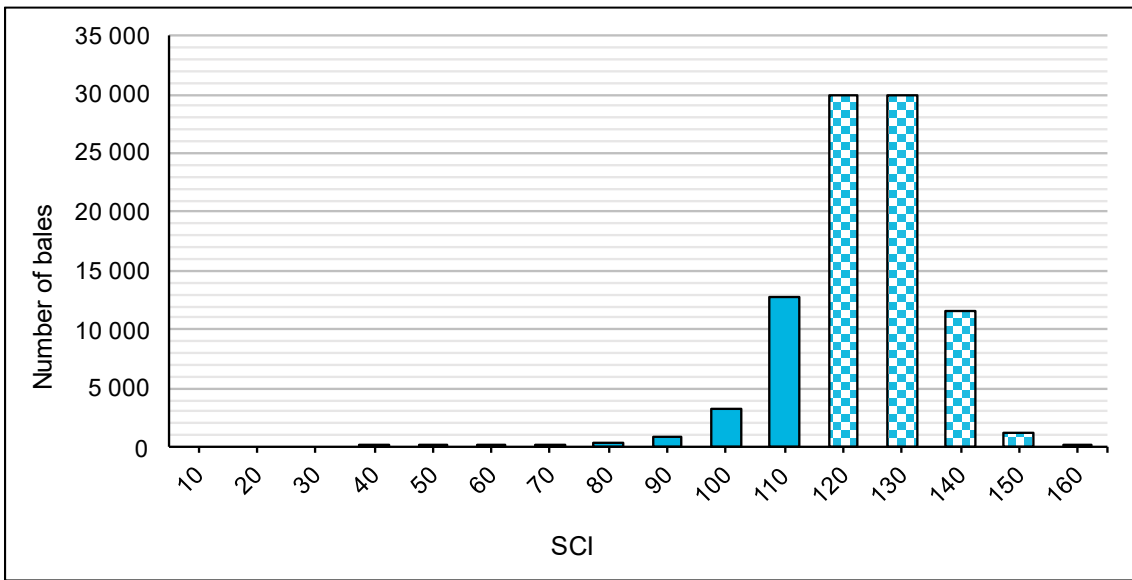


Figure 9: Distribution of the entire crop by spinning consistency index.

Cultivar Summaries

In terms of cultivars: Candia B2RF accounted for 46.64% of the cotton planted and Deltapine (DP) 1240 B2RF for 48.04%. Paymaster (PM 3225 B2RF) was 3.34% of the entire crop, it is the recommended cultivar for handpicked cotton (i.e., smallholder farmers). The following statistics were calculated based on data received from gins.

Table 10: Distribution of the Cultivars between Dryland and Irrigated Growing Conditions.

Cultivar	Number of bales		Percentage
	Dryland	Irrigation	
Candia	2 392	39 621	46.64%
DP 1240	16 470	26 801	48.04%
PM 3225	3 006	0	3.34%
Other	664	1 120	1.98%
Total	22 374	67 700	100%

Candia

Table 11: Summary of the grade achieved for Candia.

Grade	Number of bales	Percentage
Good Middling (GM)	10 259	24.4%
Strict Middling (SM)	10 383	24.7%
Middling (MIDD)	16 095	38.3%
Strict Low Middling (SLM)	5 221	12.4%
Low Middling (LM)	55	0.1%
Strict Good Ordinary (SGO)	0	0.0%
Total	42 013	100%

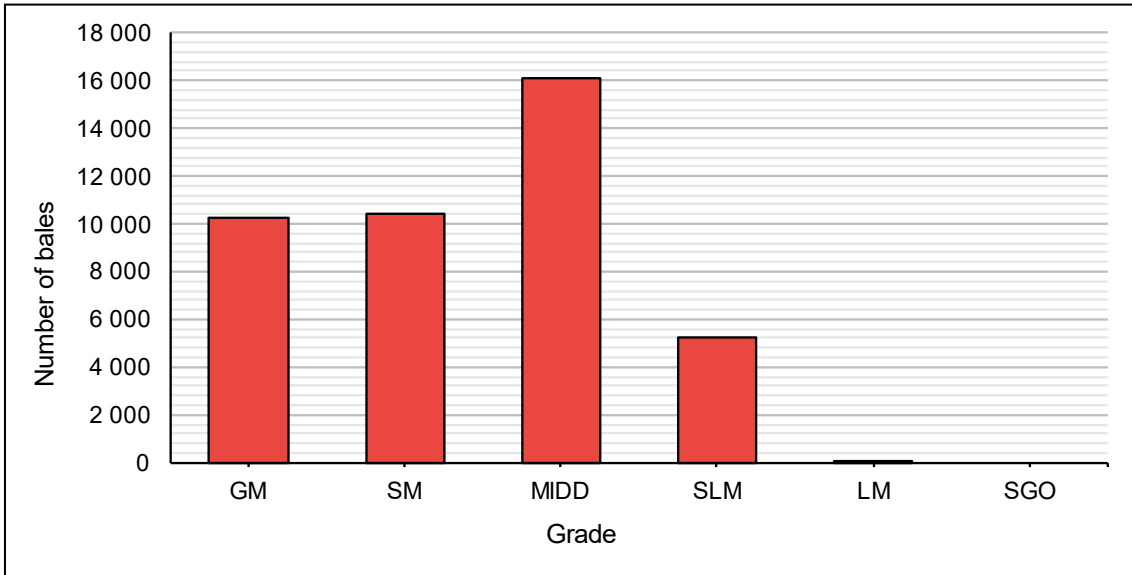


Figure 10: Distribution of Candia by grade.

Table 12: Summary of the length achieved for Candia.

Length	Description	Number of bales	Percentage
0,0 - 0,97	less than 1"	0	0.0%
0,98 - 1,04	1 1/32"	121	0.3%
1,05 - 1,07	1 1/16"	429	1.0%
1,08 - 1,10	1 3/32"	1 543	3.7%
1,11 - 1,13	1 1/8"	4 365	10.4%
1,14 - 1,16	1 5/32"	10 801	25.7%
1,17 - 1,40	1 3/16" and greater	24 754	58.9%
Total		42 013	100%

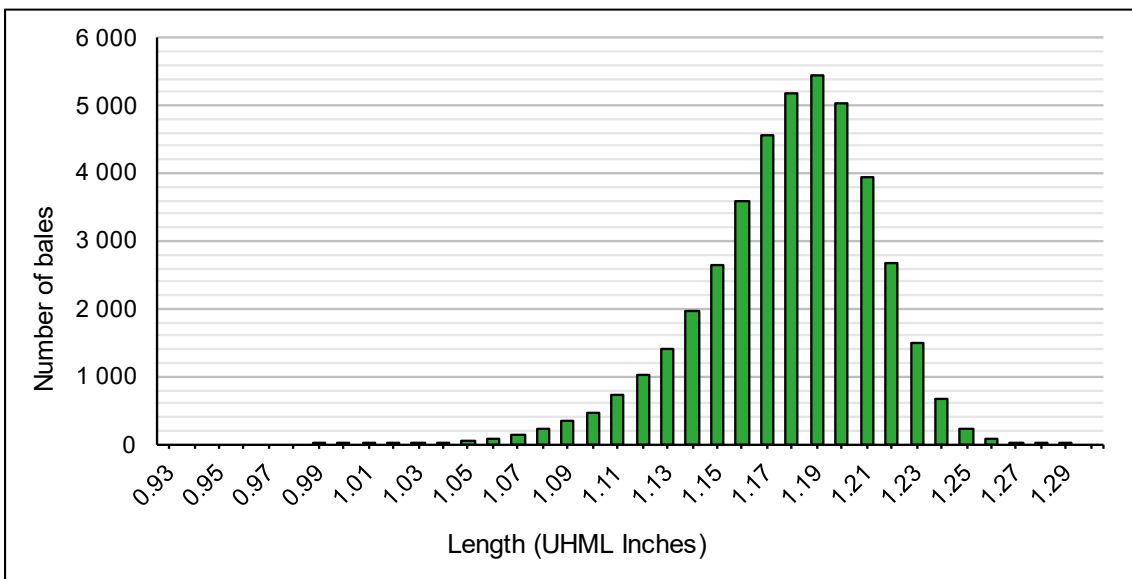


Figure 11: Distribution of Candia by length.

Table 13: Summary of the strength achieved for Candia.

Strength	Description	Number of bales	Percentage
0,0 - 21,99	Very weak	6	0.0%
22,0 - 24,49	Weak	415	1.0%
24,5 - 27,99	Medium	8 834	21.0%
28,0 - 29,99	Strong	31 793	75.7%
32,0 - 45,00	Very strong	965	2.3%
Total		42 013	100%

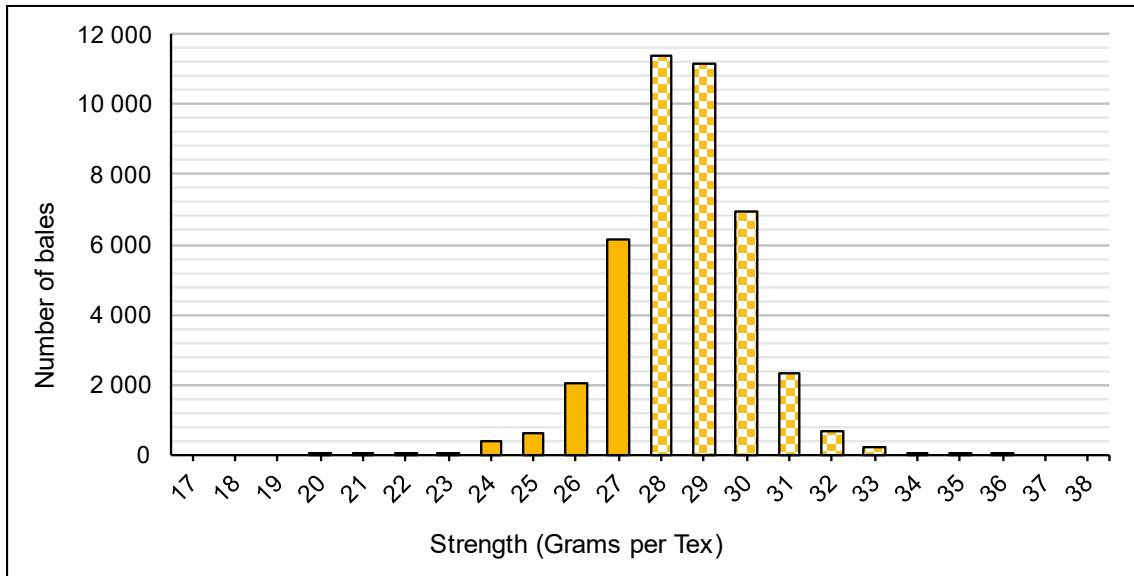


Figure 12: Distribution of Candia by strength.

Table 14: Summary of the micronaire achieved for Candia.

Micronaire	Description	Number of bales	Percentage
0,0 - 2,99	Very fine	759	1.8%
3,0 - 3,79	Fine	10 715	25.5%
3,8 - 4,79	Medium	30 169	71.8%
4,8 - 5,4	Coarse	370	0.9%
Total		42 013	100%

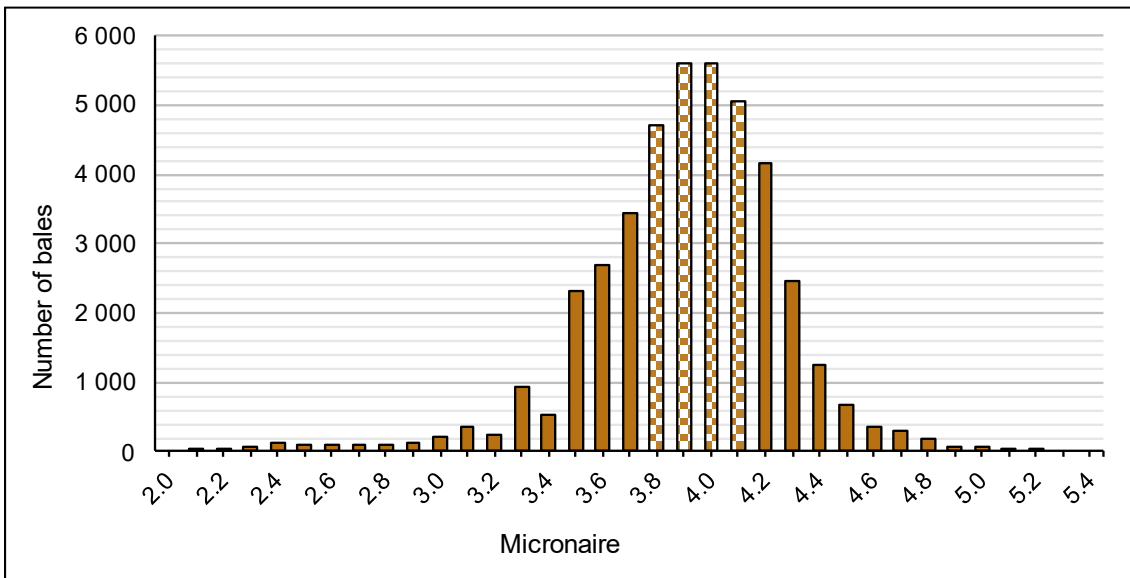


Figure 13: Distribution of Candia by micronaire.

Table 15: Summary of the short fibre index achieved for Candia.

SFI	Description	Number of bales	Percentage
0,0 - 5,99	Very low	404	1.0%
6,0 - 9,99	Low	37 207	88.6%
10,0 - 13,99	Medium	4 386	10.4%
14,0 - 17,99	High	16	0.0%
18,0 - 30,00	Very high	0	0.0%
Total		42 013	100%

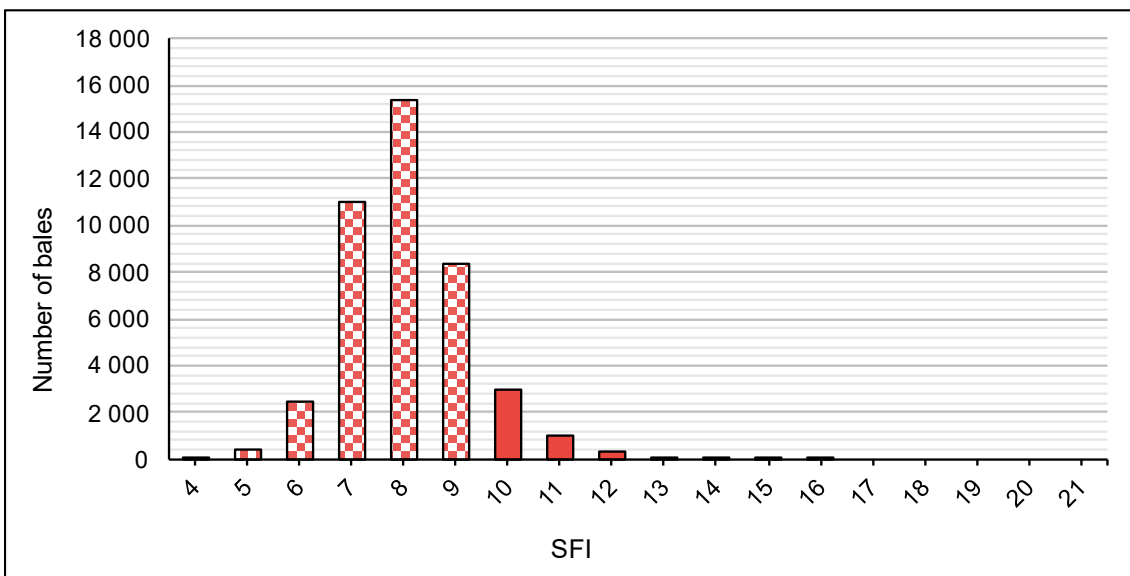


Figure 14: Distribution of Candia by short fibre index.

Table 16: Summary of the uniformity achieved for Candia.

UI	Description	Number of bales	Percentage
0,0 - 76,9	Very low	179	0.4%
77,0 - 80,9	Low	28 391	67.6%
81,0 - 84,9	Medium	13 443	32.0%
85,0 - 89,0	High	0	0.0%
Total		42 013	100%

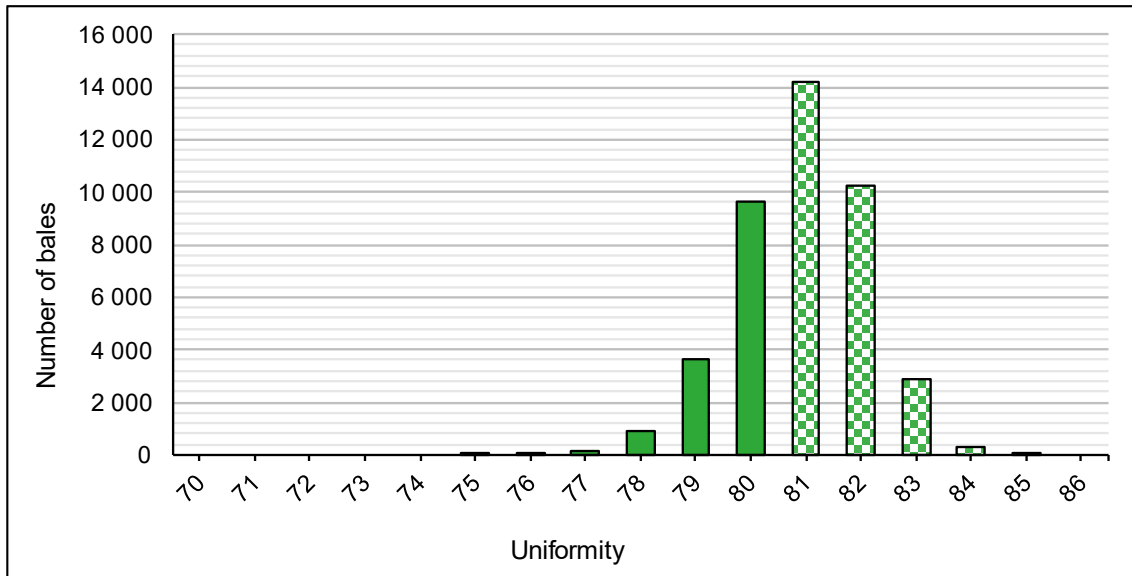


Figure 15: Distribution of Candia by uniformity.

Table 17: Summary of the spinning consistency index achieved for Candia.

SCI	Number of bales	Percentage
0 - 99	719	1.7%
100 - 119	16 256	38.7%
120 - 130	17 294	41.2%
131 - 140	7 029	16.7%
141 - 150	708	1.7%
151 - 170	7	0.0%
Total	42 013	100%

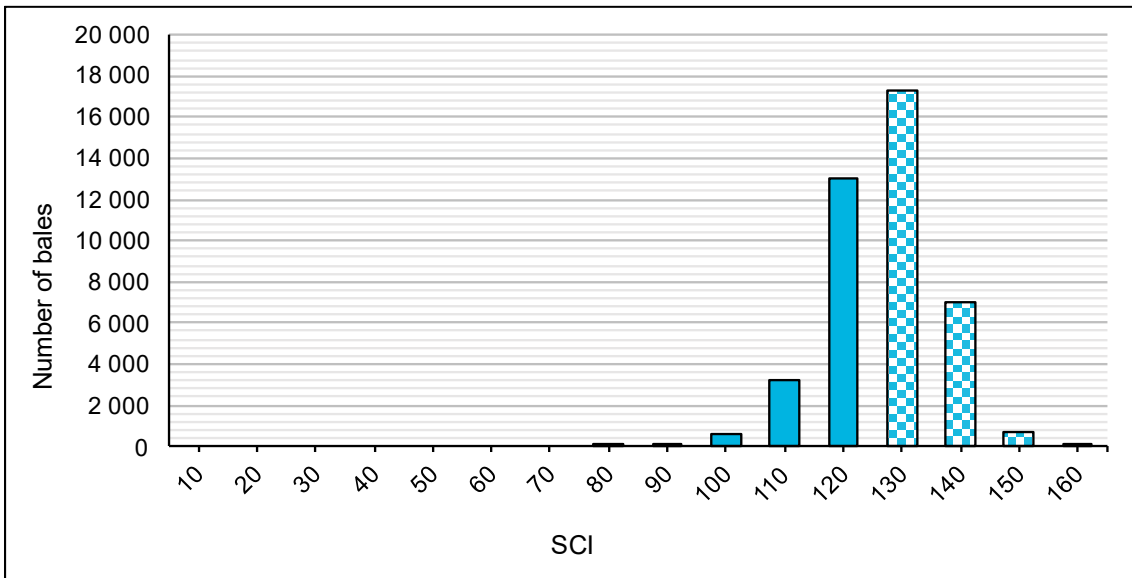


Figure 16: Distribution of Candia by spinning consistency index.

DP 1240

Table 10: Summary of the grade achieved for DP 1240.

Grade	Number of bales	Percentage
Good Middling (GM)	9 251	21.4%
Strict Middling (SM)	11 921	27.5%
Middling (MIDD)	13 976	32.3%
Strict Low Middling (SLM)	4 979	11.5%
Low Middling (LM)	1 058	2.4%
Strict Good Ordinary (SGO)	2 086	4.8%
Total	43 271	100%

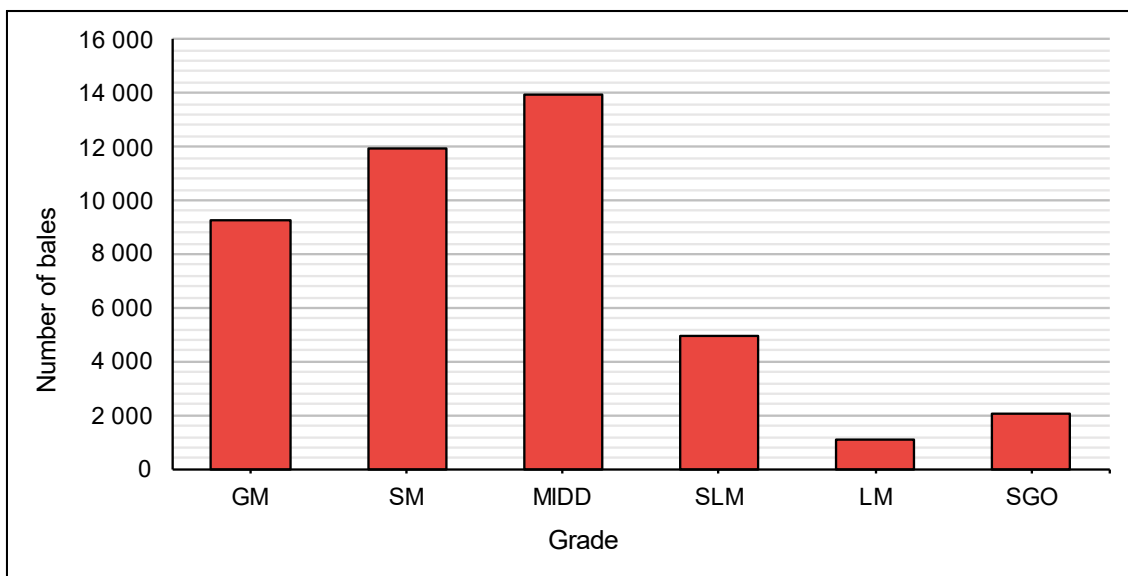


Figure 17: Distribution of DP 1240 by grade.

Table 19: Summary of the length achieved for DP 1240.

Length	Description	Number of bales	Percentage
0,0 - 0,97	less than 1"	449	1.0%
0,98 - 1,04	1 1/32"	5 324	12.3%
1,05 - 1,07	1 1/16"	5 785	13.4%
1,08 - 1,10	1 3/32"	5 222	12.1%
1,11 - 1,13	1 1/8"	7 835	18.1%
1,14 - 1,16	1 5/32"	10 573	24.4%
1,17 - 1,40	1 3/16" and greater	8 083	18.7%
Total		43 271	100%

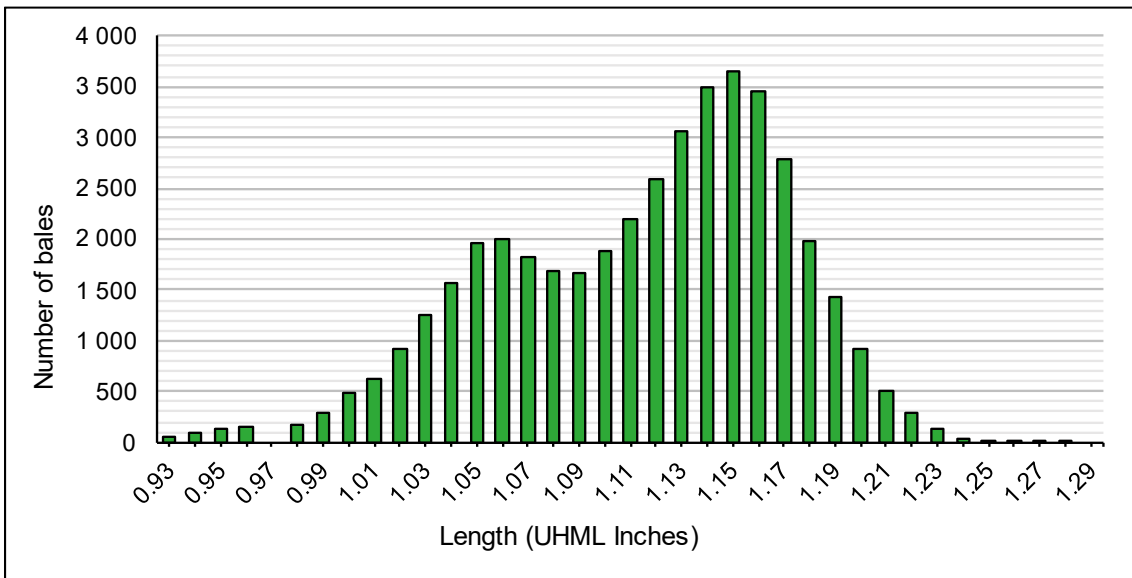


Figure 18: Distribution of DP 1240 by length.

Table 20: Summary of the strength achieved for DP 1240.

Strength	Description	Number of bales	Percentage
0,0 - 21,99	Very weak	23	0.1%
22,0 - 24,49	Weak	412	1.0%
24,5 - 27,99	Medium	4 434	10.2%
28,0 - 29,99	Strong	30 675	70.9%
32,0 - 45,00	Very strong	7 727	17.9%
Total		43 271	100%

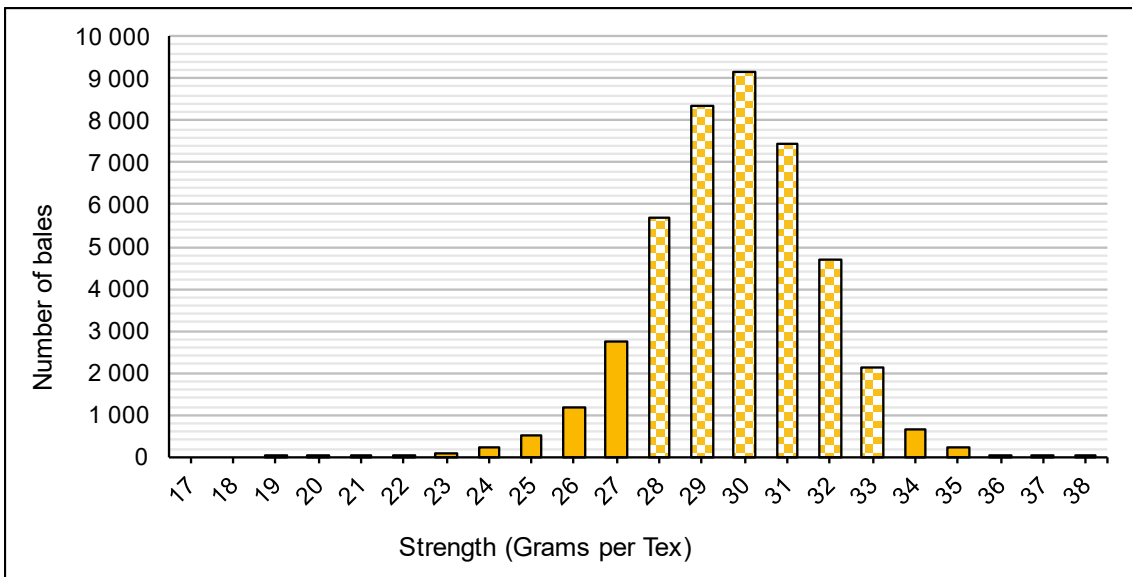


Figure 19: Distribution of DP 1240 by strength.

Table 21: Summary of the micronaire achieved for DP 1240.

Micronaire	Description	Number of bales	Percentage
0,0 - 2,99	Very fine	10	0.0%
3,0 - 3,79	Fine	2 122	4.9%
3,8 - 4,79	Medium	33 324	77.0%
4,8 – 5,4	Coarse	7 815	18.1%
Total		43 271	100%

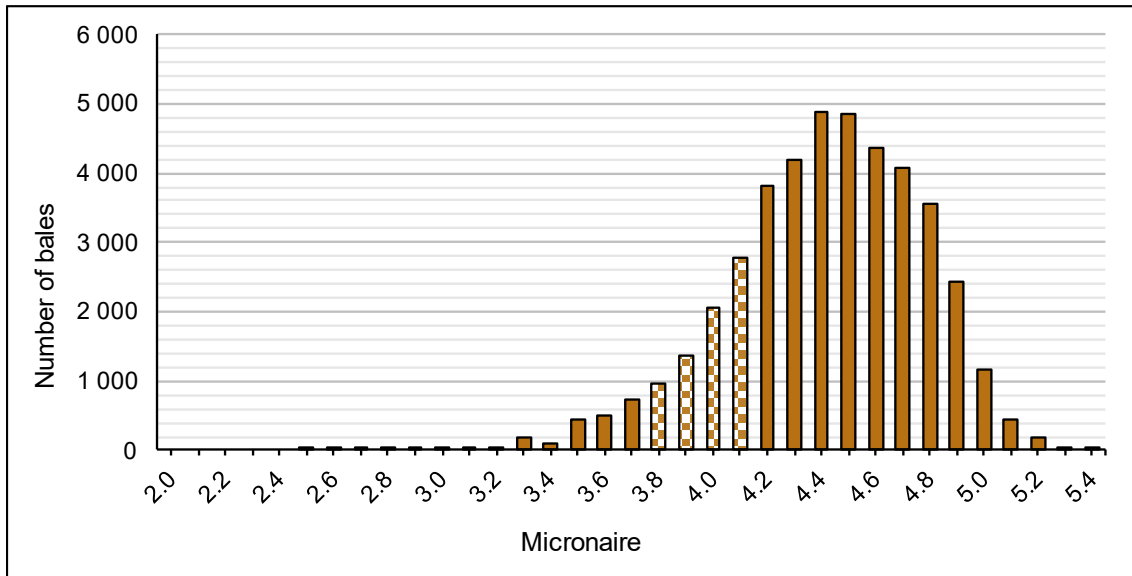


Figure 20: Distribution of DP 1240 by micronaire.

Table 22: Summary of the short fibre index achieved for DP 1240.

SFI	Description	Number of bales	Percentage
0,0 - 5,99	Very low	314	0.7%
6,0 - 9,99	Low	35 477	82.0%
10,0 - 13,99	Medium	7 139	16.5%
14,0 - 17,99	High	337	0.8%
18,0 - 30,00	Very high	4	0.0%
Total		43 271	100%

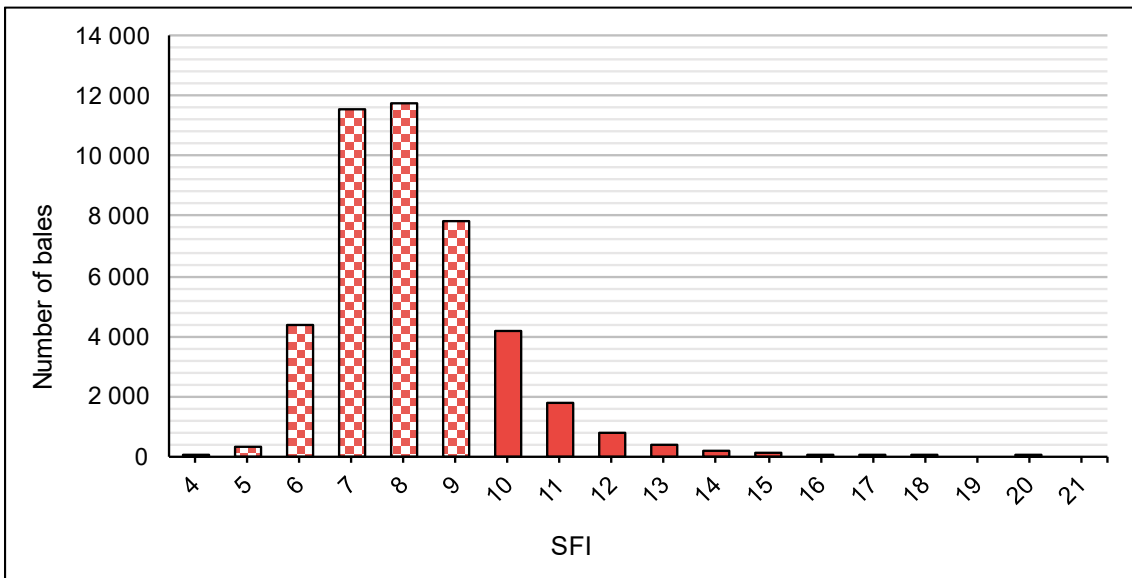


Figure 21: Distribution of DP 1240 by short fibre index.

Table 23: Summary of the uniformity achieved for DP 1240.

UI	Description	Number of bales	Percentage
0,0 - 76,9	Very low	92	0.2%
77,0 - 80,9	Low	14 223	32.9%
81,0 - 84,9	Medium	28 915	66.8%
85,0 - 89,0	High	41	0.1%
Total		43 271	100%

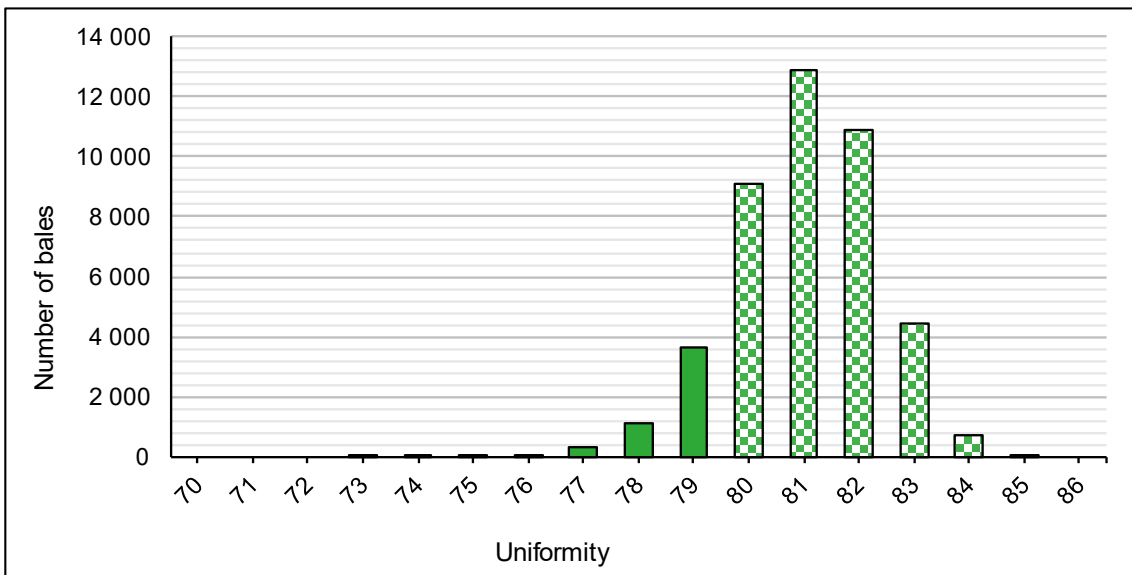


Figure 22: Distribution of DP 1240 by uniformity.

Table 24: Summary of the spinning consistency index achieved for DP 1240.

SCI	Number of bales	Percentage
0 - 99	1 161	2.7%
100 - 119	9 631	22.3%
120 - 130	15 011	34.7%
131 - 140	12 397	28.6%
141 - 150	4 531	10.5%
151 - 170	540	1.2%
Total	43 271	100%

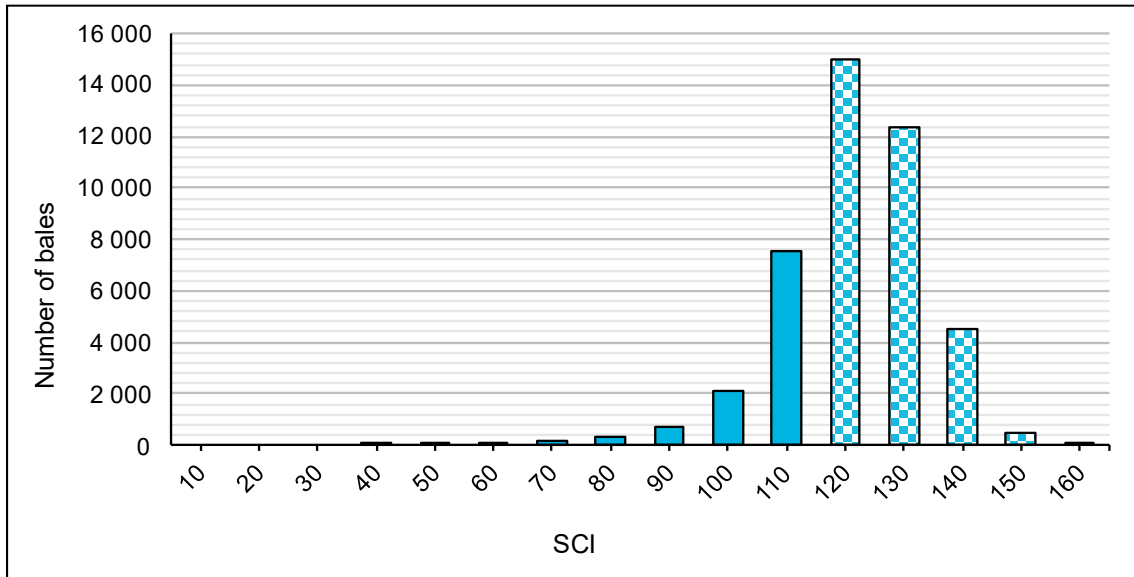


Figure 23: Distribution of DP 1240 by spinning consistency index.

PM 3225 (Paymaster)

Table 25: Summary of the grade achieved for PM 3225.

Grade	Number of bales	Percentage
Good Middling (GM)	50	1.7%
Strict Middling (SM)	456	15.2%
Middling (MIDD)	2 480	82.5%
Strict Low Middling (SLM)	20	0.7%
Low Middling (LM)	0	0.0%
Strict Good Ordinary (SGO)	0	0.0%
Total	3 006	100%

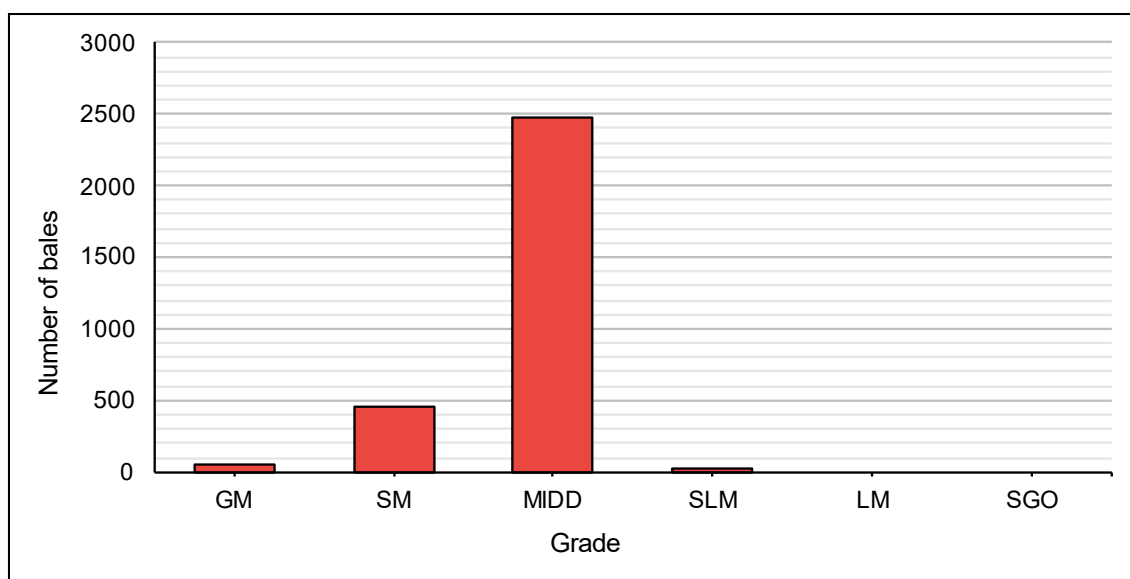


Figure 24: Distribution of PM 3225 by grade.

Table 26: Summary of the length achieved for PM 3225.

Length	Description	Number of bales	Percentage
0,0 - 0,97	less than 1"	266	8.8%
0,98 - 1,04	1 1/32"	2 175	72.4%
1,05 - 1,07	1 1/16"	487	16.2%
1,08 - 1,10	1 3/32"	61	2.0%
1,11 - 1,13	1 1/8"	13	0.4%
1,14 - 1,16	1 5/32"	3	0.1%
1,17 - 1,40	1 3/16" and greater	1	0.0%
Total		3 006	100%

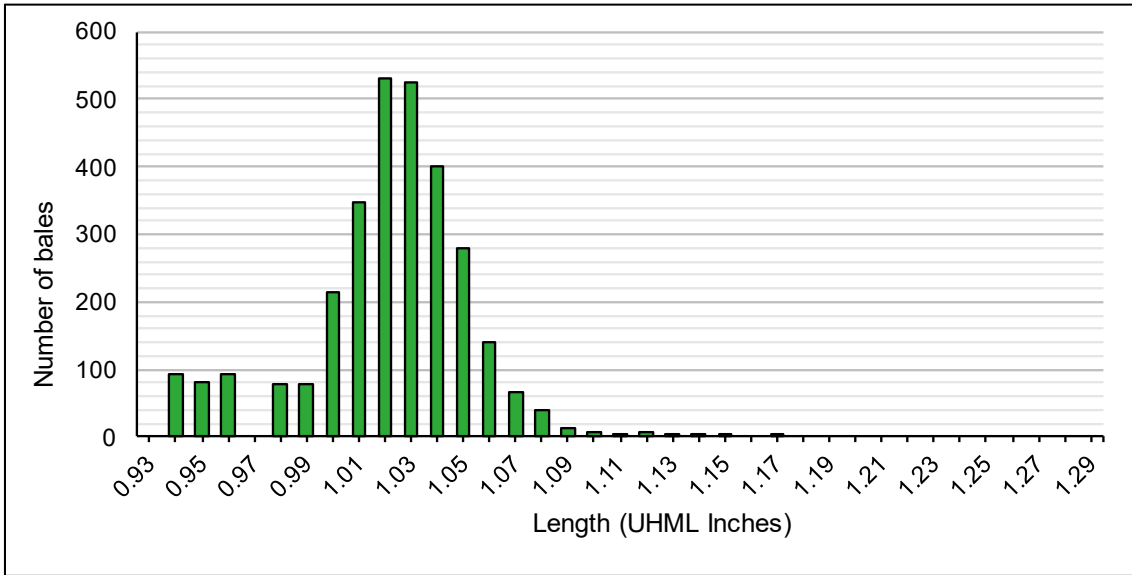


Figure 25: Distribution of PM 3225 by length.

Table 27: Summary of the strength achieved for PM 3225.

Strength	Description	Number of bales	Percentage
0,0 - 21,99	Very weak	0	0.0%
22,0 - 24,49	Weak	11	0.4%
24,5 - 27,99	Medium	500	16.6%
28,0 - 29,99	Strong	2 378	79.1%
32,0 - 45,00	Very strong	117	3.9%
Total		3 006	100%

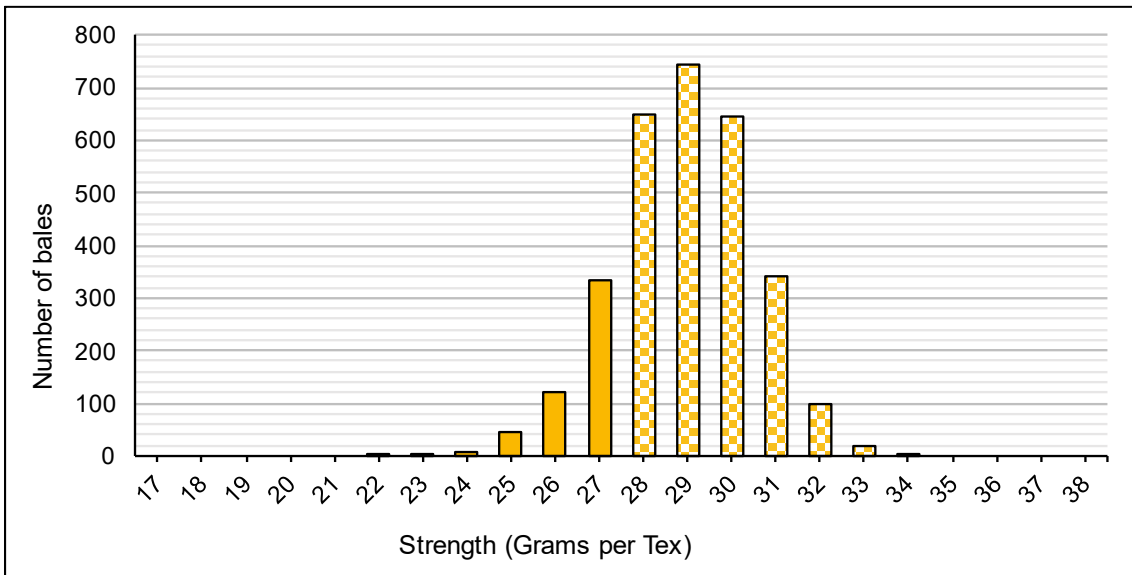


Figure 26: Distribution of PM 3225 by strength.

Table 28: Summary of the micronaire achieved for PM 3225.

Micronaire	Description	Number of bales	Percentage
0,0 - 2,99	Very fine	28	0.9%
3,0 - 3,79	Fine	670	22.3%
3,8 - 4,79	Medium	2 293	76.3%
4,8 – 5,4	Coarse	15	0.5%
Total		3 006	100%

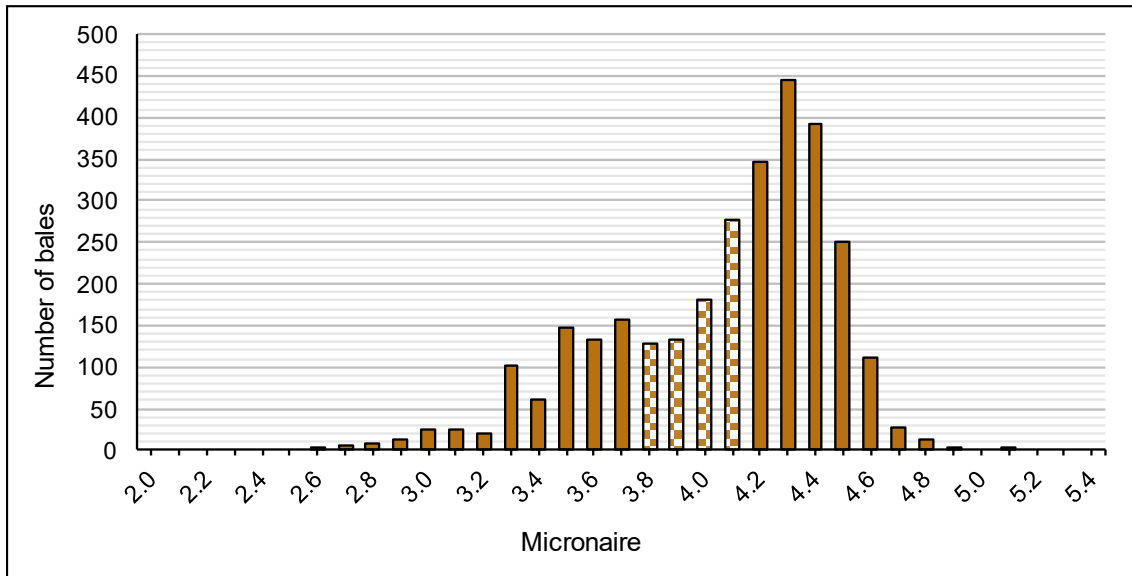


Figure 27: Distribution of PM 3225 by micronaire.

Table 29: Summary of the short fibre index achieved for PM 3225.

SFI	Description	Number of bales	Percentage
0,0 - 5,99	Very low	3	0.1%
6,0 - 9,99	Low	2 599	86.5%
10,0 - 13,99	Medium	403	13.4%
14,0 - 17,99	High	1	0.0%
18,0 - 30,00	Very high	0	0.0%
Total		3 006	100%

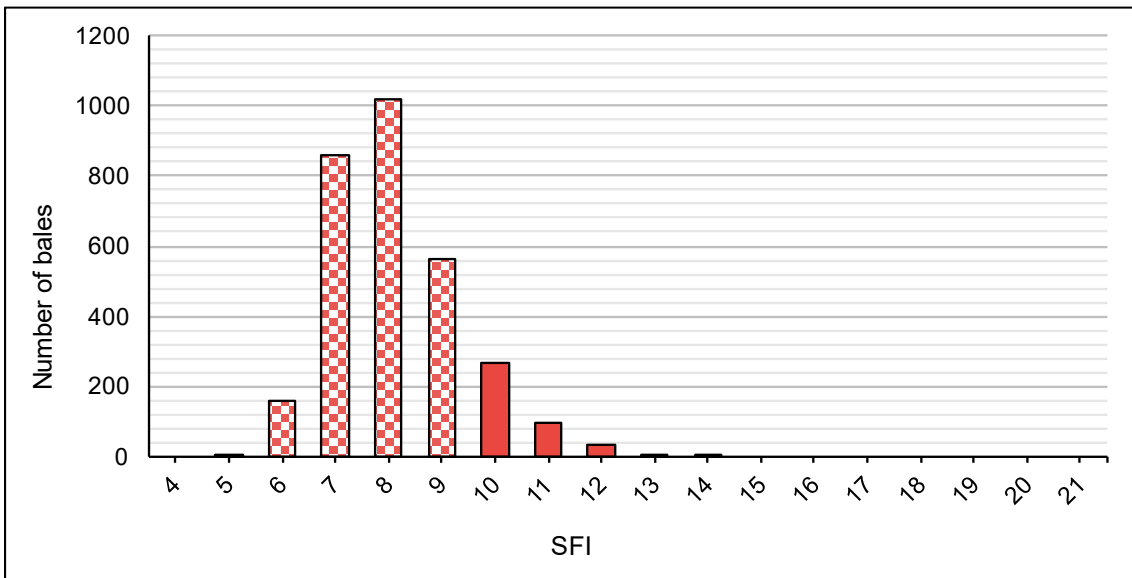


Figure 28: Distribution of PM 3225 by short fibre index.

Table 30: Summary of the uniformity achieved for PM 3225.

UI	Description	Number of bales	Percentage
0,0 - 76,9	Very low	1	0.0%
77,0 - 80,9	Low	1 903	63.3%
81,0 - 84,9	Medium	1 102	36.7%
85,0 - 89,0	High	0	0.0%
Total		3 006	100%

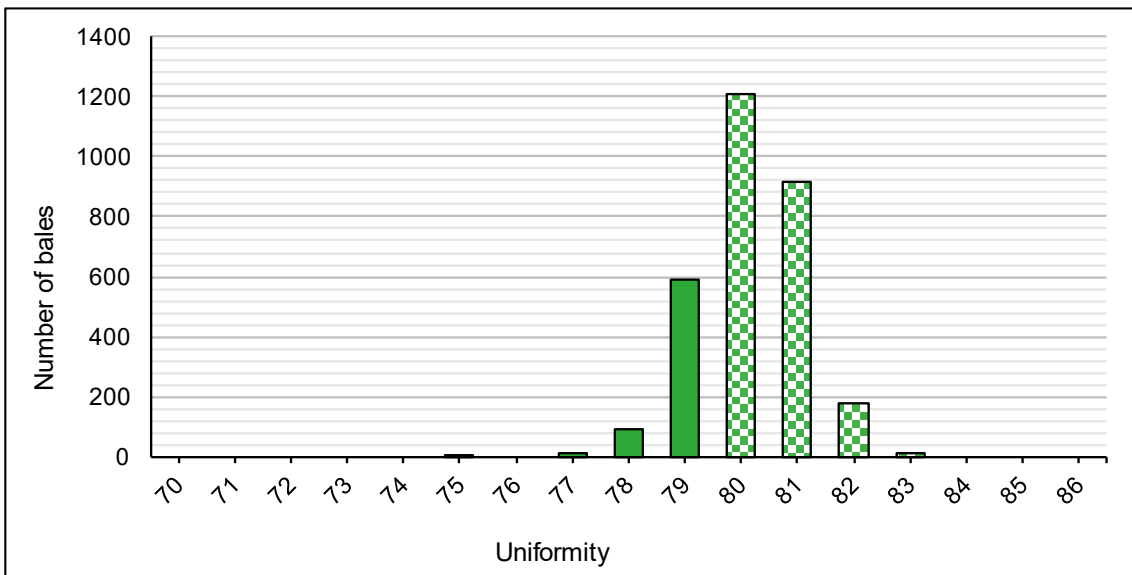


Figure 29: Distribution of PM 3225 by uniformity.

Table 31: Summary of the spinning consistency index achieved for PM 3225.

SCI	Number of bales	Percentage
0 - 99	55	1.8%
100 - 119	1 858	61.8%
120 - 130	986	32.8%
131 - 140	99	3.3%
141 - 150	8	0.3%
151 - 170	0	0.0%
Total	3 006	100%

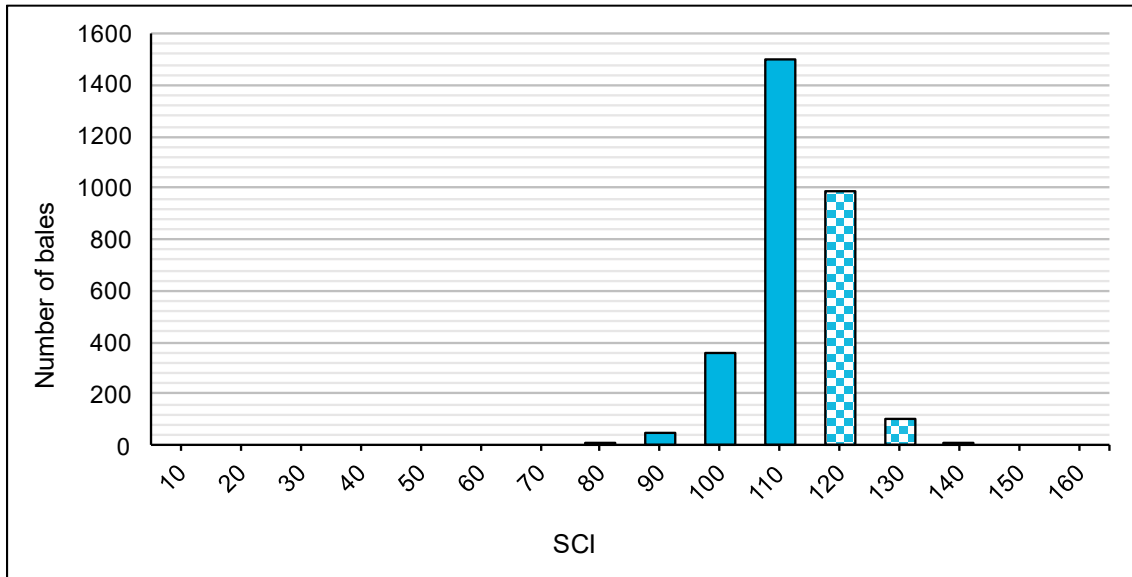


Figure 30: Distribution of PM 3225 by spinning consistency index.

References

Uster Technologies AG. 2008. *Uster HVI 1000 Application Handbook*. Switzerland: Uster Technologies AG.