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Date 09/07/2020

OFDA2000 analysis report, sorted by micron

In-house method derived from IWTO-47

OFDA2000 settings: Correction factor ☒
Trim high ☐
Washed fibre ☐

(declared for this batch)

Client

Élevage Exemple

Data: Exemple_alpagas_09-07-2020.mes

Alpaca fibre analysis - 7 animals

Instrument OFDA2000 v5.370 · Calibration 19 May 2016 · File Exemple_alpagas_09-07-2020.mes

Mid-side sampling date given: 16/05/20 · Laboratory measurement: 09/07/20

Sample	Date of birth	Sex	Colour	Mean micron µm	SDD µm	CVD %	CEM µm	CF %	Fine From Tip mm	%<15µm	MaxD µm	MinD µm	BaseD µm	SD Along Profile µm	SD Across µm	SpinF µm	Mean C °/mm	SDC °/mm	Length staple mm	Number of fibres
Averages				21.7	5.0	23.2	9.5	93.0	48.6	6.9	23.8	19.5	21.0	1.2	4.8	21.5	38.8	29.7	92.9	5,561
Arno	30/04/19	M	White	16.8	4.18	24.8	7.5	99.0	100	31.2	18.8	15.4	15.4	1.11	4.02	17.0	42.6	34.4	110	4,857
Belle	03/08/17	F	Brown	19.7	4.17	21.1	7.2	98.5	80	5.1	21.2	17.9	18.8	0.94	4.00	19.2	44.0	31.6	95	6,308
Cyrus	23/05/19	M	Black	20.8	5.69	27.3	10.5	94.6	5	9.2	24.3	16.4	20.3	2.17	5.36	21.5	31.7	22.9	135	6,493
Diego	29/07/10	M	White	22.0	4.76	21.6	9.3	94.7	40	1.5	23.1	20.8	21.4	0.68	4.72	21.5	52.1	37.9	50	2,165
Elsa	26/07/13	F	White	22.2	4.77	21.5	8.8	95.0	70	1.1	24.3	19.5	22.9	1.44	4.54	21.7	40.6	35.5	85	3,381
Félix	31/08/17	M	Black	22.3	4.65	20.8	8.7	95.0	30	0.5	23.9	20.5	21.7	1.09	4.48	21.7	28.5	20.4	110	10,926
Gaïa	26/09/11	F	Rose Grey	27.7	6.92	25.0	14.3	73.9	15	0.0	30.7	26.0	26.5	1.27	6.77	27.9	32.4	25.2	65	4,800

Super Royal <16 µm Royal Baby 16 - 18 µm Baby 19 - 20 µm Fine 21 - 24 µm Medium 25 - 28 µm Strong 29 - 31 µm Extra Strong 32 - 36 µm Coarse > 37 µm

General comment on the batch

- Overall assessment: your herd of 7 alpacas shows good overall fineness, with a mean micron of 21.7 µm and an average comfort factor of 93.0 %. Six animals out of seven are between Royal Baby and Fine: a solid base for a soft fibre.
- Uniformity and genetic selection: Belle, Diego and Félix have very even fleeces, with a low standard deviation and a stable profile along the staple. They are good assets for passing on uniformity. Cyrus shows the greatest variation (CV 27.3 %): his fineness is promising, his evenness is still to be confirmed.
- Comfort and spinning: comfort is excellent for Arno (99.0 %) and Belle (98.5 %), and very good for Cyrus, Diego, Elsa and Félix (between 94.6 and 95.0 %). For five animals the staple measures 85 to 135 mm, a length well suited to spinning; Diego's and Gaïa's staples are shorter.
- Points to watch: Gaïa (27.7 µm, comfort factor 73.9 %) stands clearly apart from the rest of the herd. Arno and Cyrus, born in 2019, are still young: their fineness may still change.
- Practical conclusion: have Arno, Cyrus and Gaïa tested again at the next shearing, and base your breeding choices on the evenness of Belle, Diego and Félix.
- Fibre goal: not stated in your order. Let us know with your next samples to receive even more targeted advice.

Key

Mean micron: mean fibre diameter (µm)

SDD: standard deviation of diameter (µm)

CVD: coefficient of variation of diameter, SDD / mean micron x 100 (%)

CEM: Coarse Edge Measurement, gap between the mean micron and the threshold of the coarsest 5% of fibres; threshold = mean micron + CEM (µm)

CF: comfort factor, % of fibres <= 30 µm

Fine From Tip: distance from the tip to the finest point (mm)

%<15µm: % of fibres finer than 15 µm

MaxD / MinD: highest / lowest mean diameter of the 5 mm segments of the staple profile (µm)

SD Across and SD Along Profile are computed on the staple profile, segment by segment; the SDD is computed on all fibres measured. SD Across can therefore be higher or lower than the SDD.

Mean micron cell colour: fineness class (unrounded value).

BaseD: diameter closest to the skin, last 5 mm segment of the profile (µm)

SD Along Profile: standard deviation of the mean diameters of the 5 mm segments, from tip to base (µm)

SD Across: variation between fibres, mean of the SDs of the 5 mm segments (µm)

SpinF: spinning fineness, $0.881 \times \text{mean micron} \times \sqrt{1 + 5 \times (\text{CVD}/100)^2}$ (µm)

Mean C: mean curvature; SDC: standard deviation of curvature (°/mm)

Length staple: staple length (mm)

Number of fibres: number of fibres analysed

Averages: simple mean of the samples, computed by the tool



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Visual comparisons

In-house method derived from IWTO-47

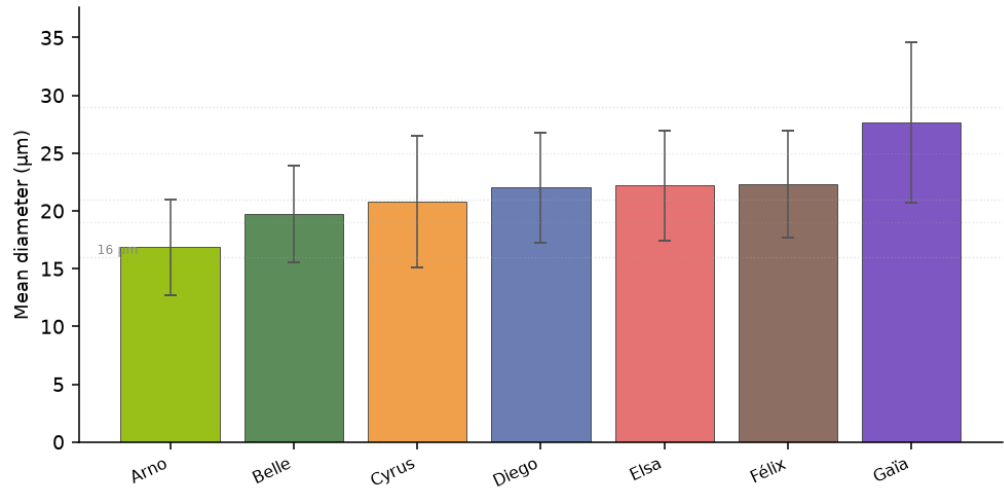
OFDA2000 settings: Correction factor ☒
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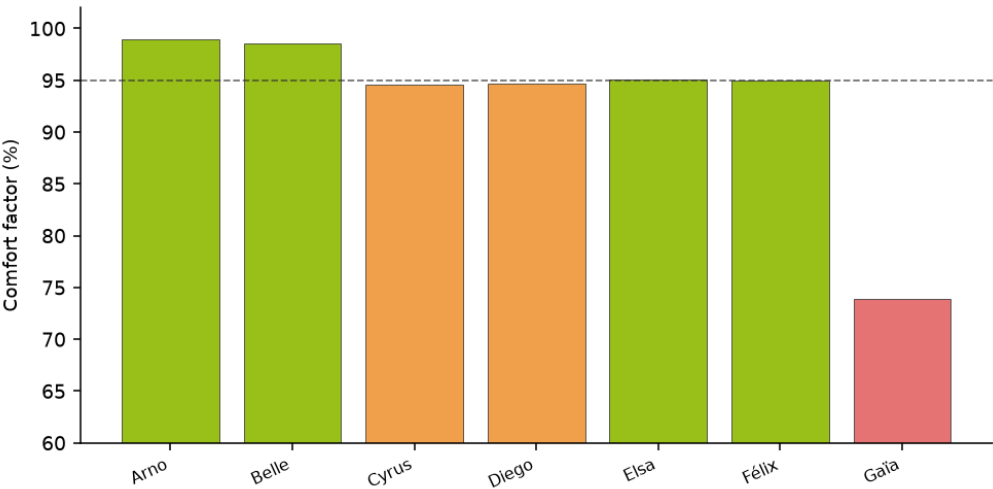
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Batch Exemple - 09/07/2020

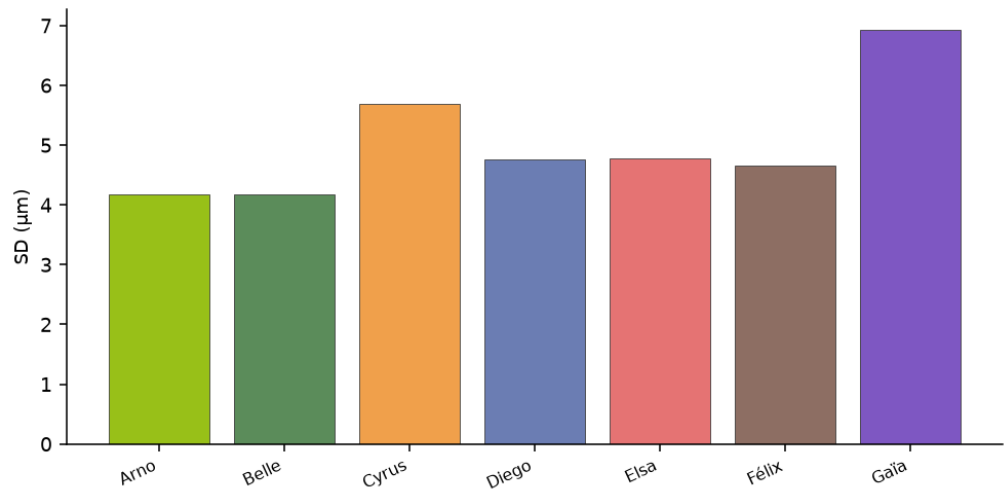
Mean diameter ± SD



Comfort factor (% fibres ≤ 30 µm)



Standard deviation SD - uniformity (selection priority)



The diameter error bars show the spread (SD), not the uncertainty of the mean. SD in microns is the preferred indicator for judging uniformity between animals of different fineness; the comfort factor tracks overall progress towards a soft fleece.



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Distributions and selection priorities

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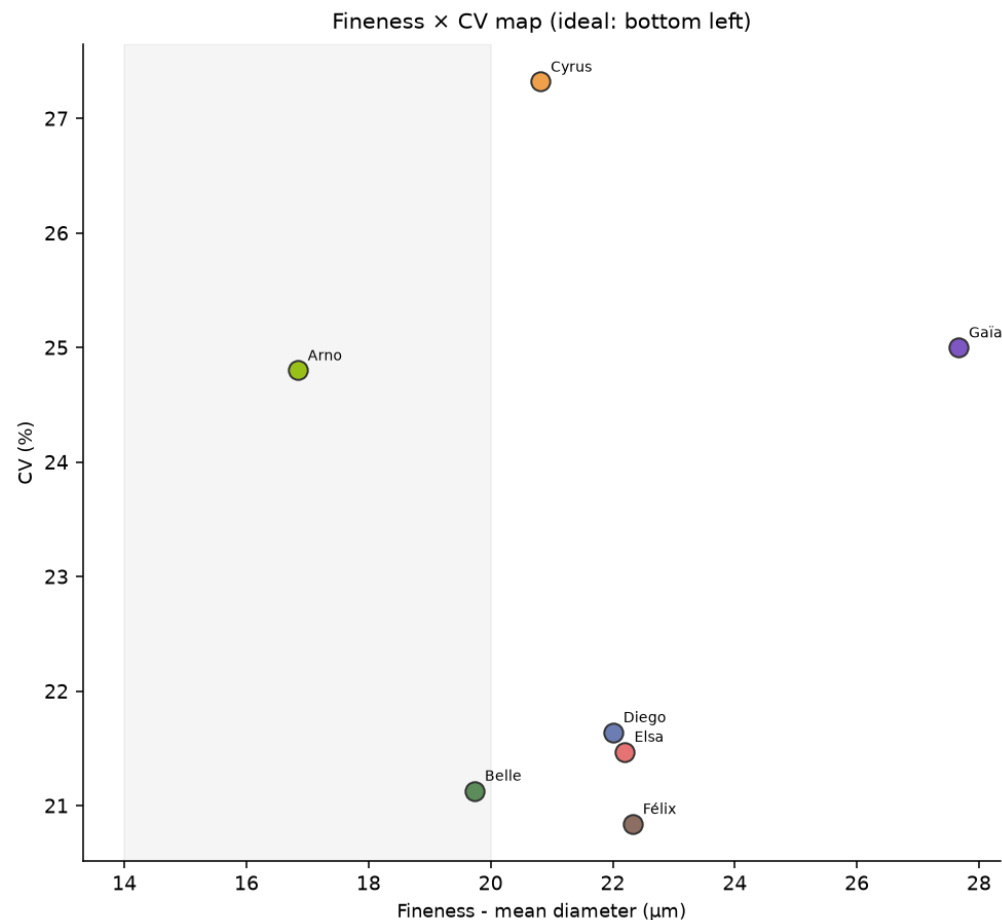
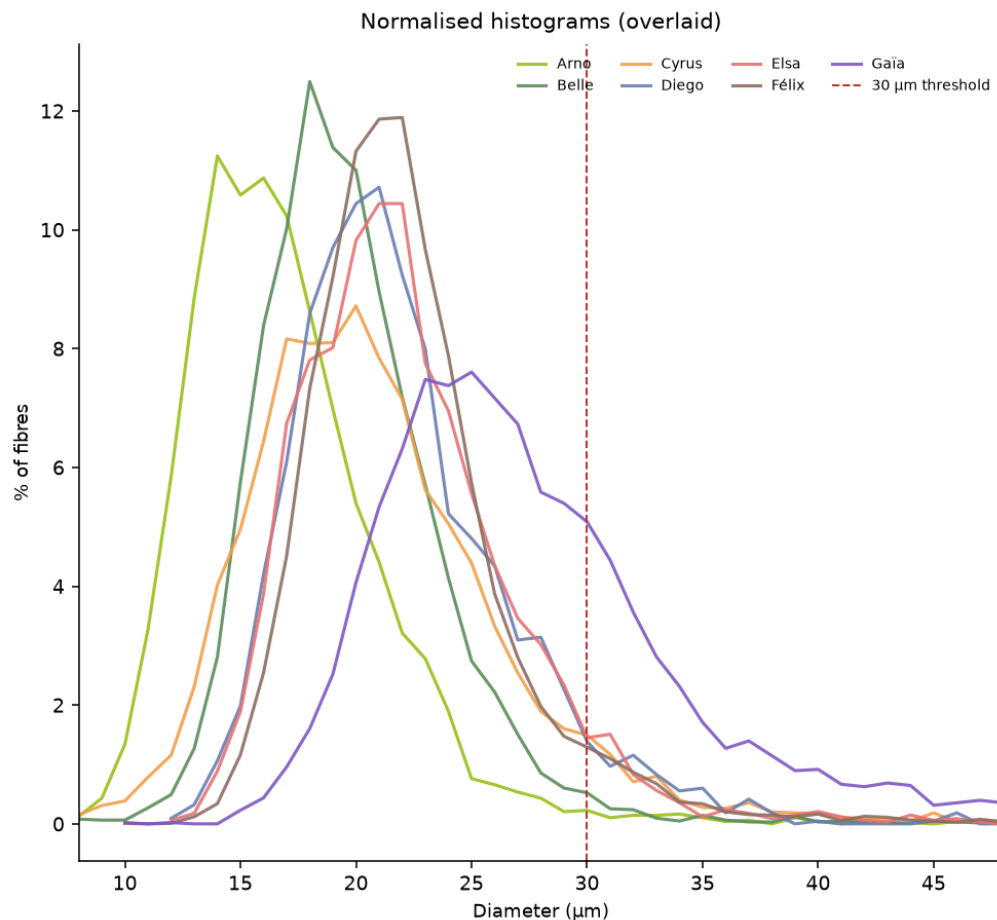
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Priorities for improving the herd (Fibre Lab reading)

What stands out: a fine and comfortable herd, with a very even core formed by Belle, Diego and Félix. Animals to test again at the next shearing: Arno and Cyrus, still young, to confirm their adult fineness, and Gaïa, whose diameter and comfort are clearly behind. Selection: focus first on evenness (SD and CV), then on mean diameter, then on comfort factor. Belle, both fine and even, is an excellent asset for the future of your herd.



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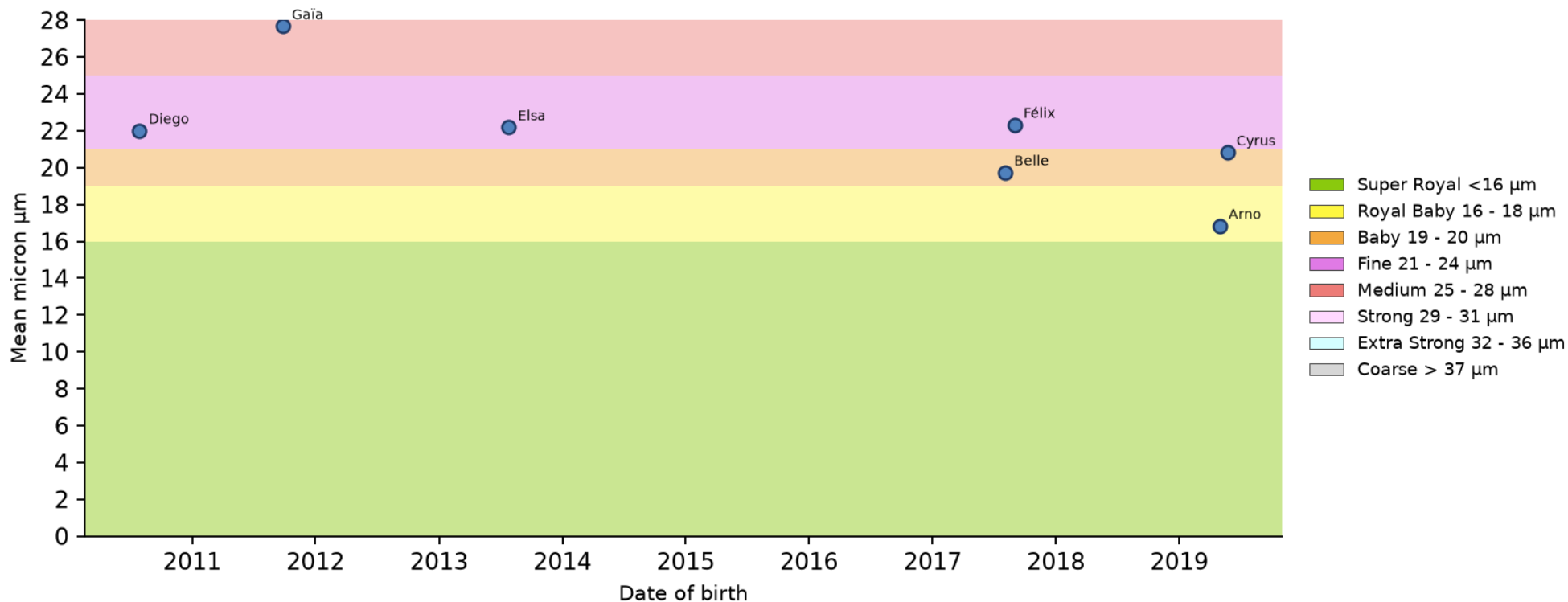
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Mean micron μm by date of birth



Fibre Lab metrology framework

OFDA 2000 measurement in snippet mode, in-house method derived from IWTO-47. Documented internal checks: daily self-test on reference fibres and a reference staple for each batch.

Commissioned on site in Saulzoir by the manufacturer (Mark Brims / OFDA). Monitored through a documented quality-control programme (charter v3.0). Details: fibreabandco.com/en/content/6-our-quality-charter