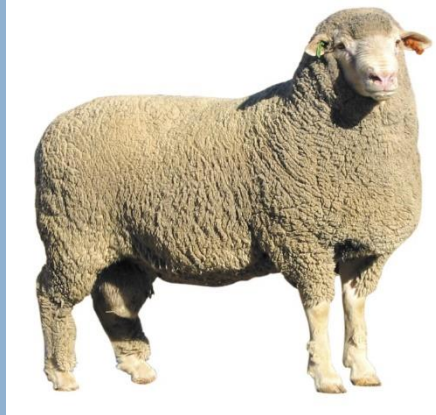




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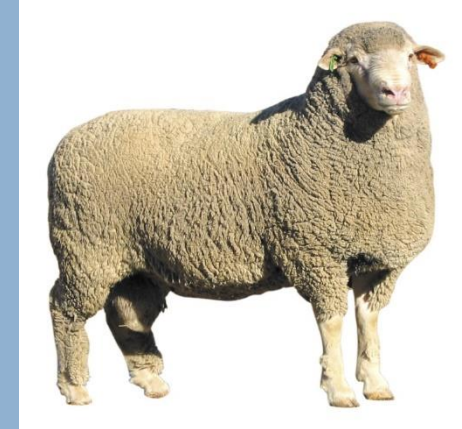
STATUS OF THE DOHNE IN SOUTH AFRICA



GJ Delport and JL Vosloo



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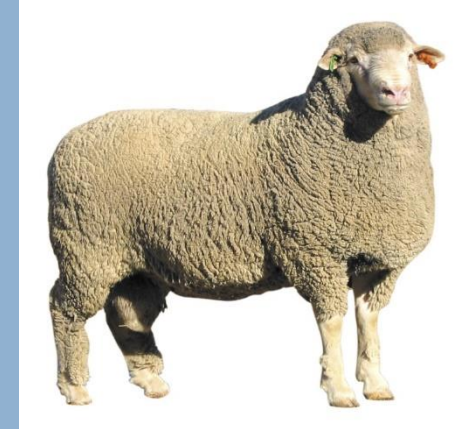
STATUS OF THE DOHNE IN SOUTH AFRICA

- ***90 BREEDERS WITH 36 000 REGISTERED EWES***

Aim :

- **To analyse the efficient use of the South African genetic resource**

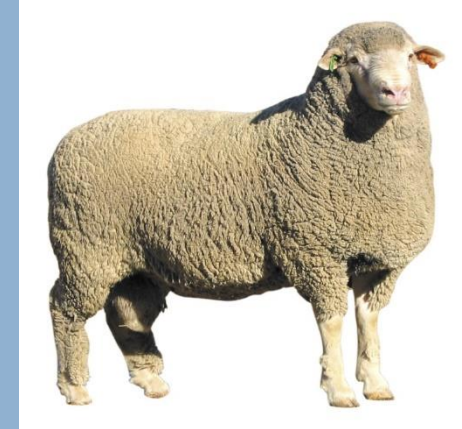




BACKGROUND INFORMATION :

- **FROM 2000 SOUTH AFRICAN BREEDERS WERE WARNED TO RECORD 100 DAYS BODY WEIGHTS ACCURATELY AND PROVIDE THE DATA TO THE CENTRAL DATA BASE**
- **2012 – 100 DAY DATA RECORDING COMPULSORY FOR ALL SOUTH AFRICAN BREEDERS (BREEDERS WERE ALLOWED TO BACK CAPTURE DATA TO 2000 TO STRENGTHEN ACCURACY OF EVALUATION**
- **DATA SET USED FOR ROUTINE BREEDING VALUE EVALUATION WAS TRUNCATED AT 2000 TO PROVIDE COMPLETE INFORMATION ONLY ON ANIMALS COMPLETELY RECORDED FOR 100 DAYS AND FINAL 12 MONTHS OF AGE INFORMATION**





THE MODEL:

• MULTIPLE TRAIT MODEL INCLUDING :

100 DAYS : WEANING WEIGHT DIRECT AND MATERNAL

**12 MONTHS : BODY WEIGHT
CLEAN FLEECE WEIGHT
FIBRE DIAMETER**

• REPEATABILITY MODEL:

**NUMBER OF LAMBS WEANED PER EWE LAMBED
MAXIMUM FOUR LAMBINGS PER EWE**





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DATA USED :

- **PERIOD – 2000 TO 2016**
- **NUMBER OF ANIMALS 276 470**

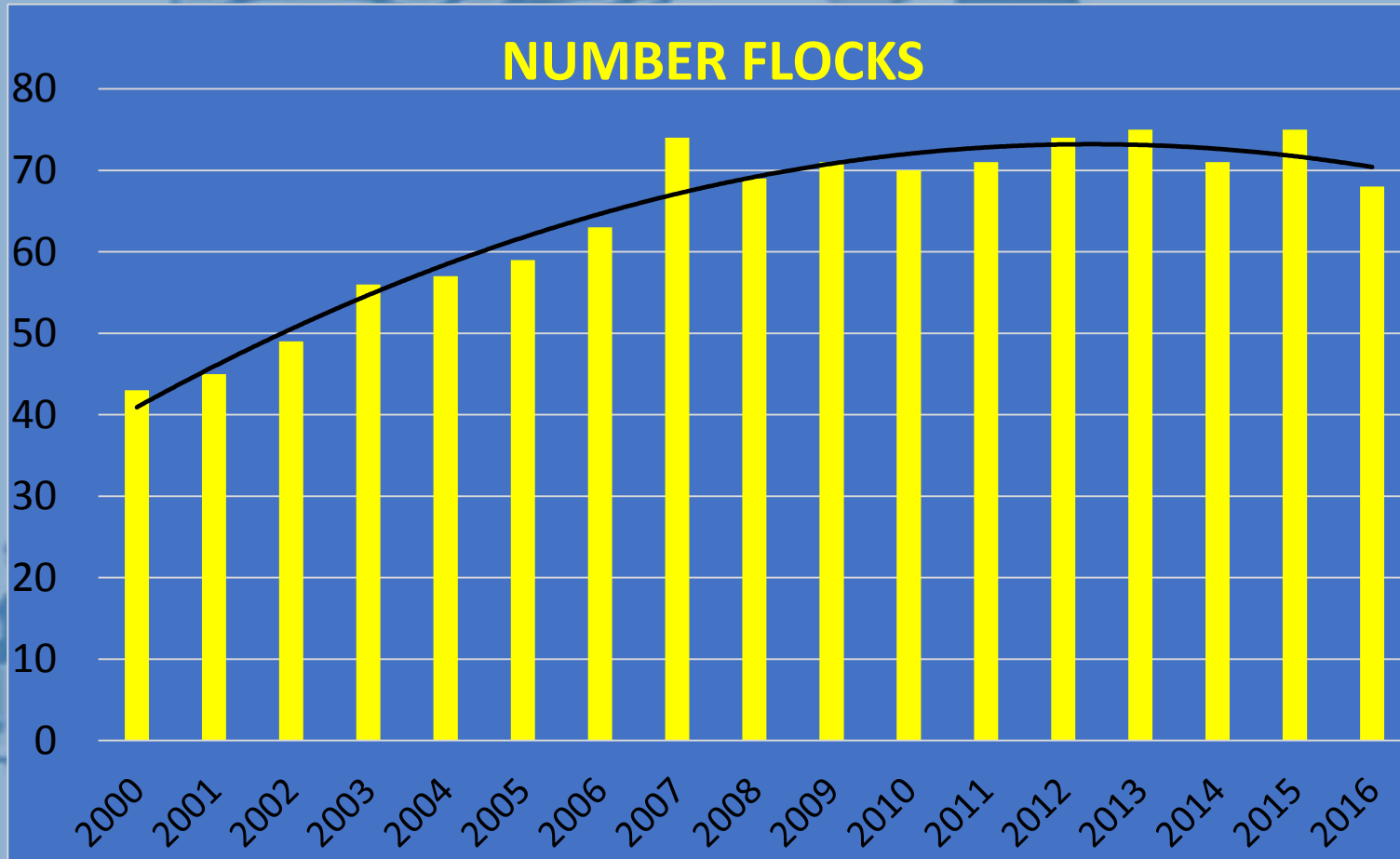
DATA SELECTION:

- **RESTRICTED TO STUDS WITH F6 ANIMALS AND BETTER (NO UPGRADING FLOCKS)**
- **ONLY CONTEMPORARY GROUPS WITH MORE THAN 10 ANIMALS**



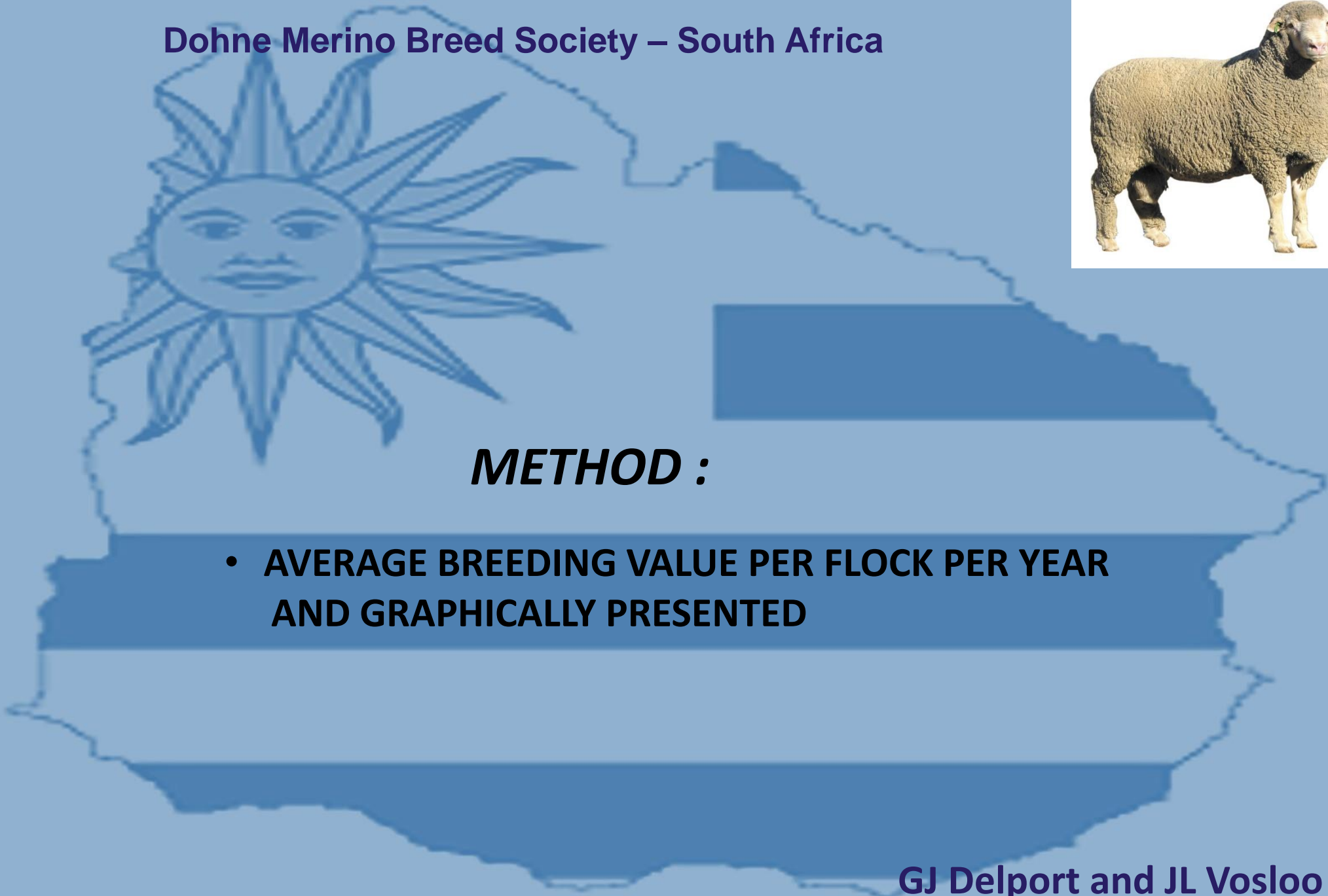


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METHOD :

- **AVERAGE BREEDING VALUE PER FLOCK PER YEAR AND GRAPHICALLY PRESENTED**





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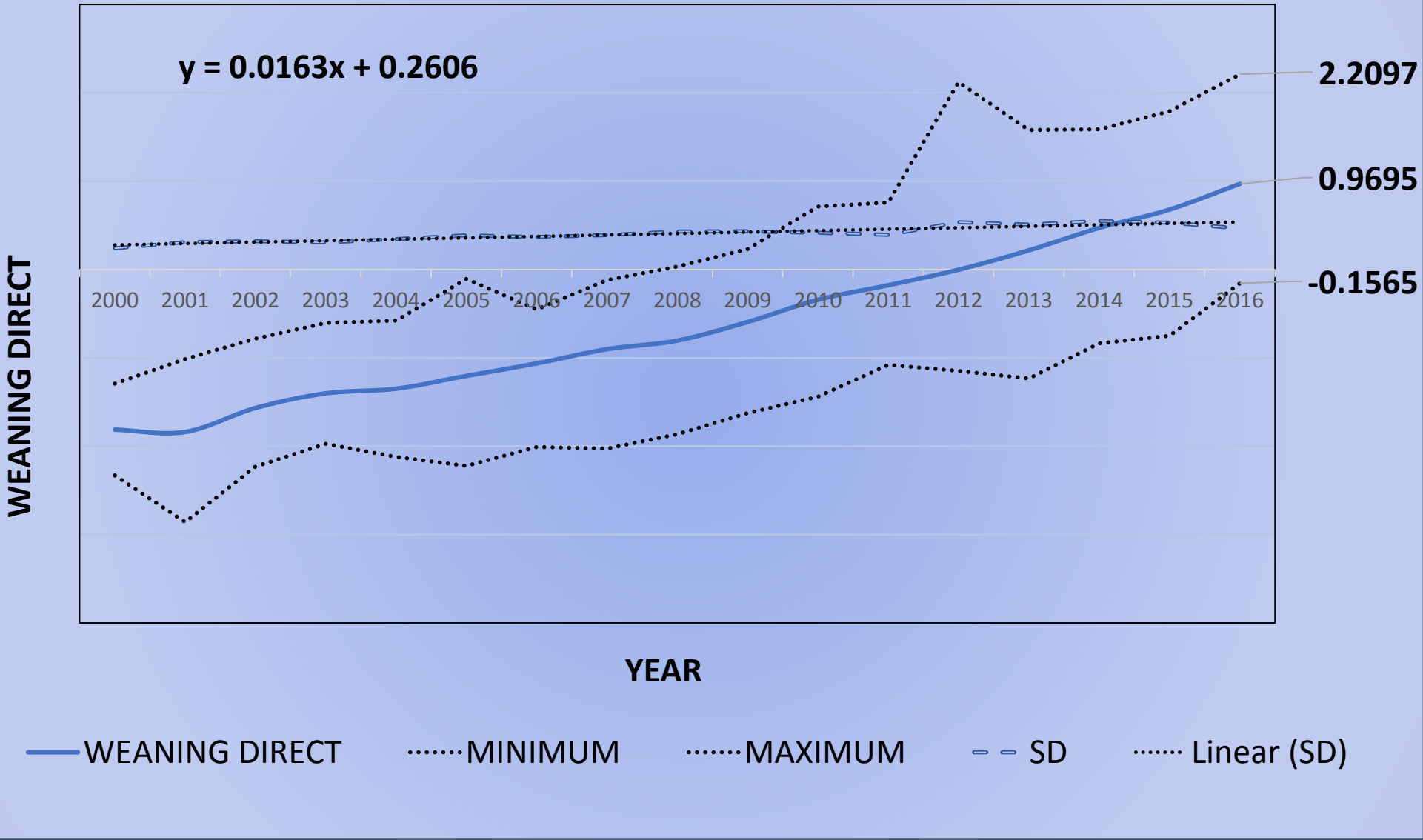
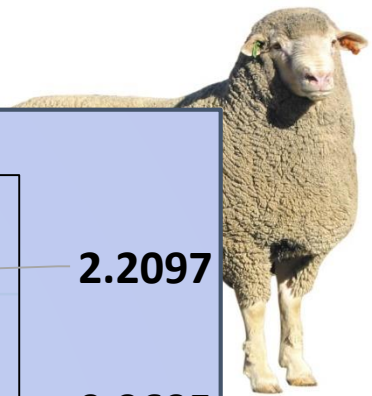
SUMMARY OF FLOCK AVERAGES PER YEAR

	NUMBER/ FLOCK/YR	WEANING DIRECT	WEANING MATERNAL	12 MTS BODY WEIGHT	12 MTS CLEAN FLEECE WEIGHT	12 MTS FIBRE DIAMETER	GENERAL MERIT	REPRO- DUCTION
AVERAGE	253	-0.5195	-0.0461	-1.0002	-0.0258	0.1739	-2.8183	-1.924
STANDARD DEVIATION	262	0.9319	0.2117	1.5412	0.0730	0.2783	4.7576	2.3071



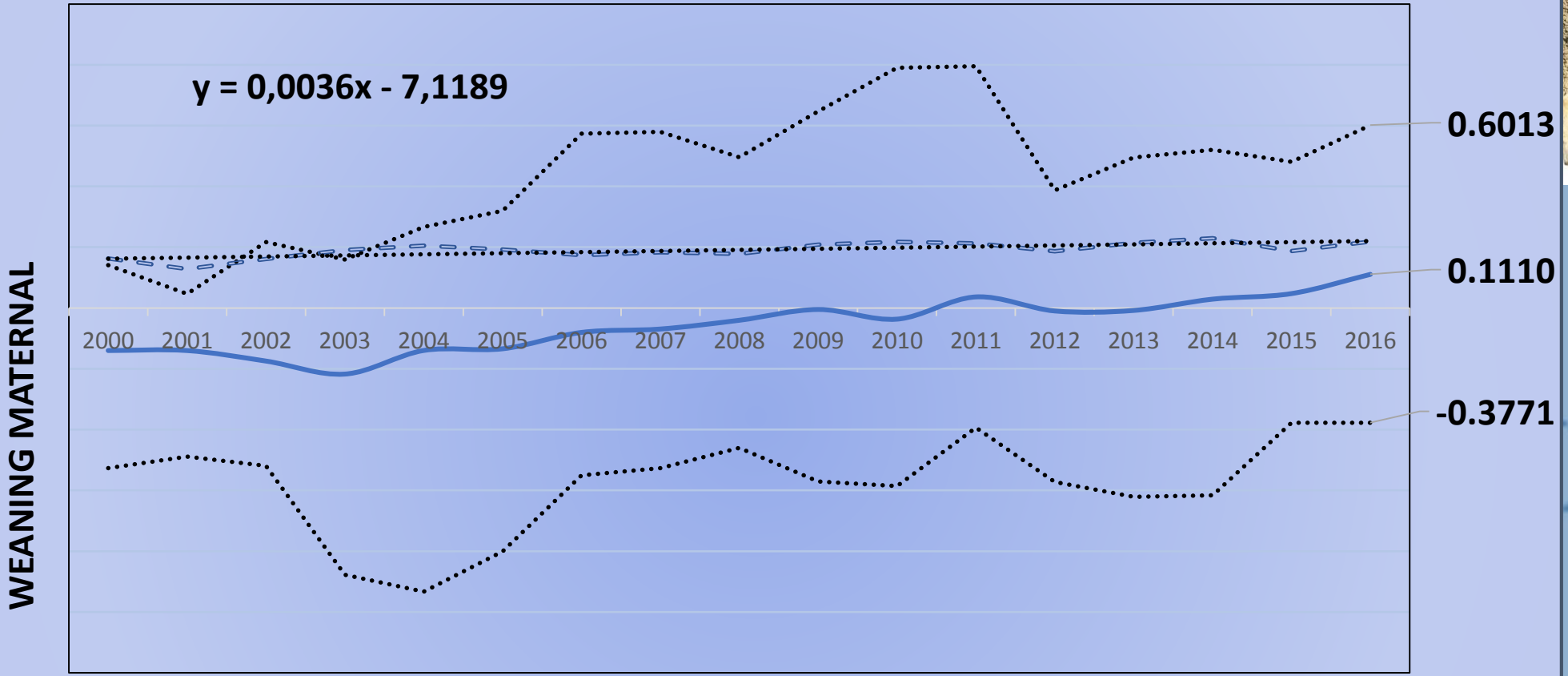
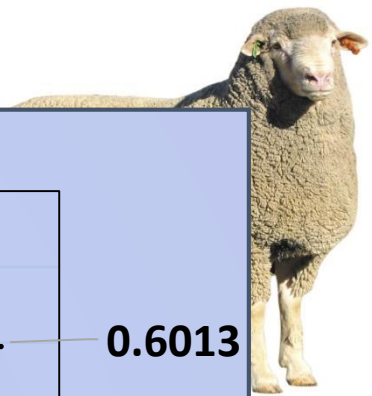


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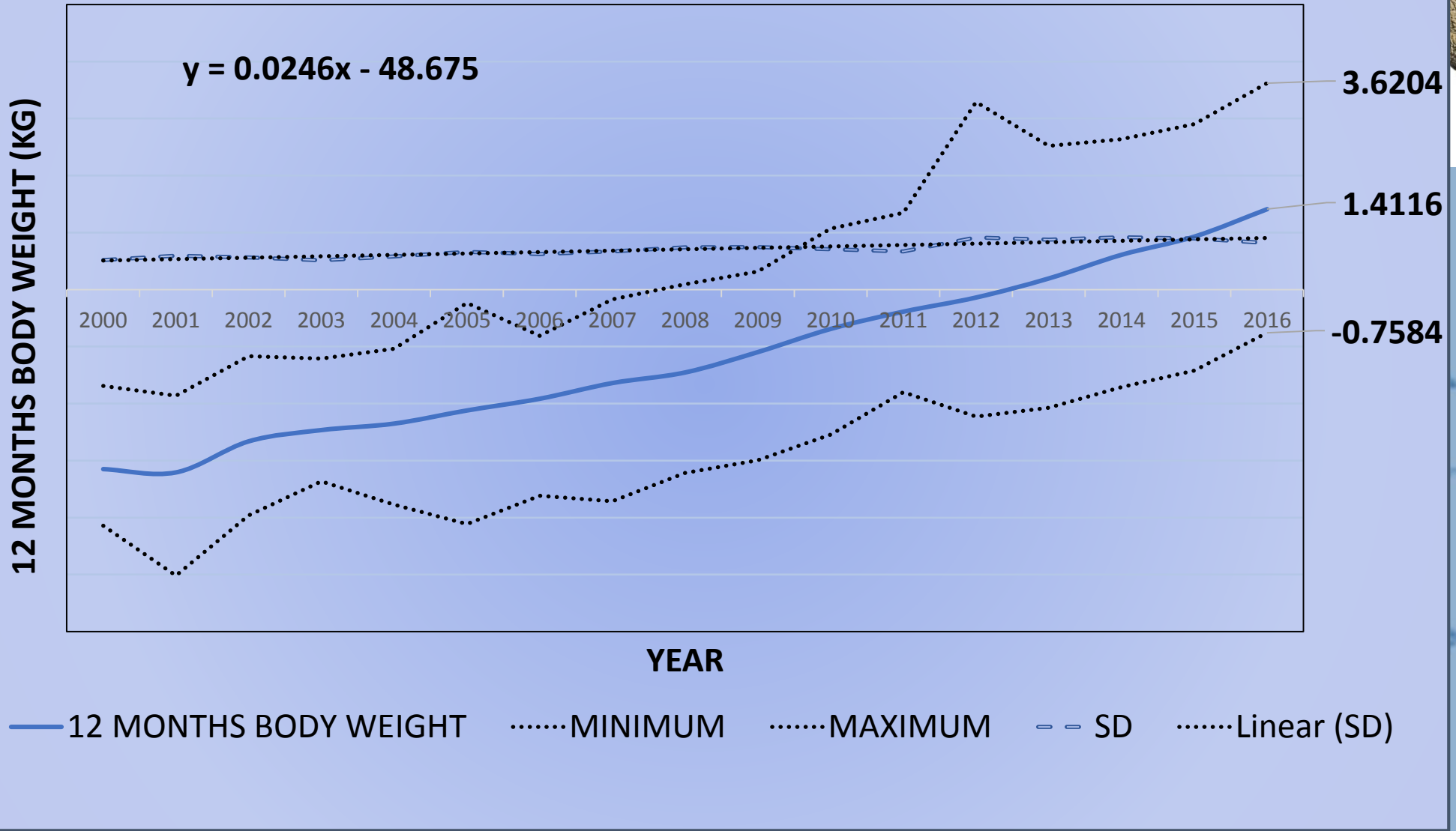
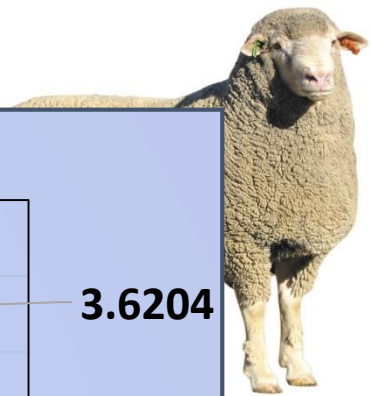
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— WEANING MATERNAL MINIMUM MAXIMUM - - SD Linear (SD)

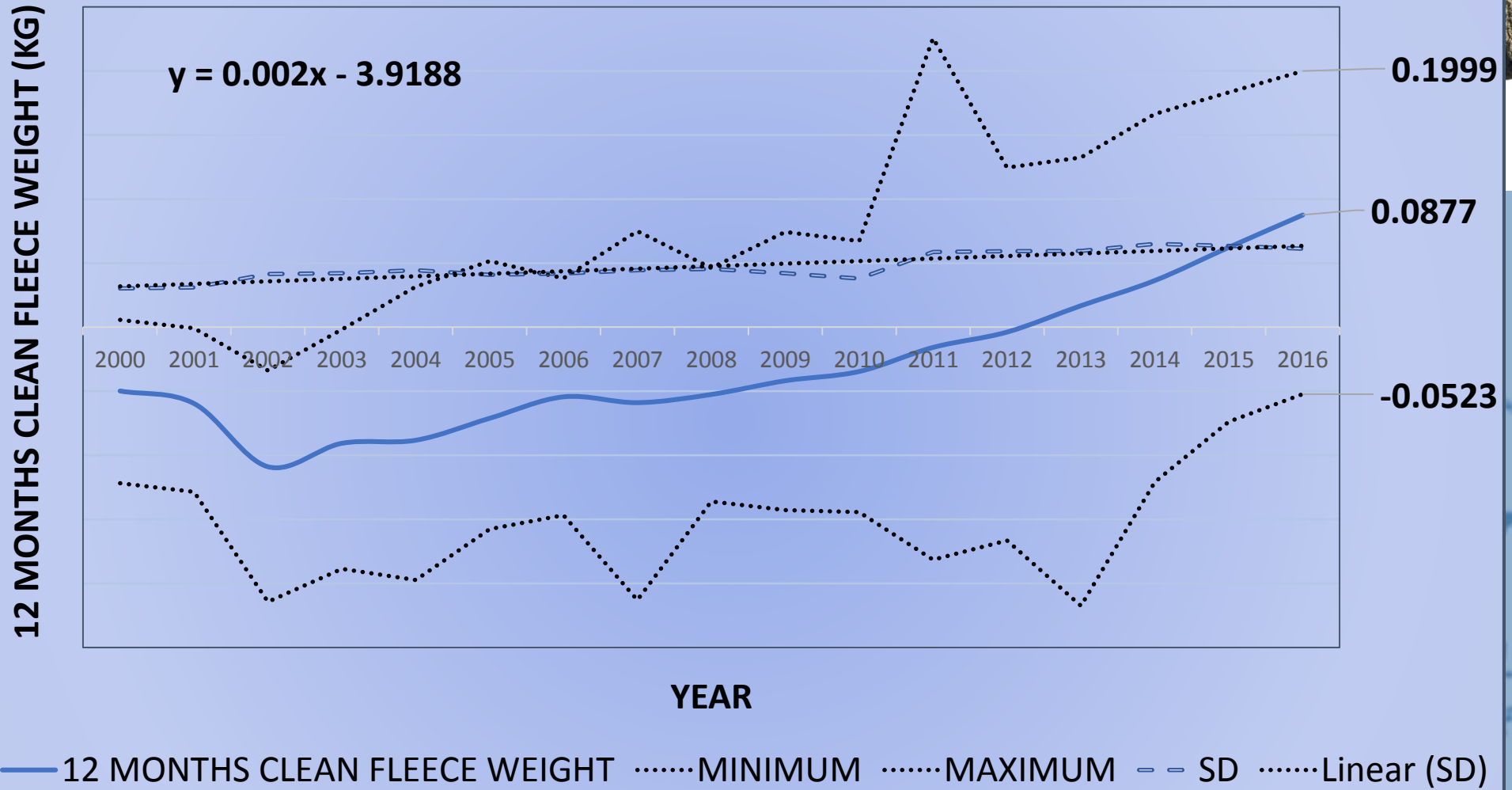
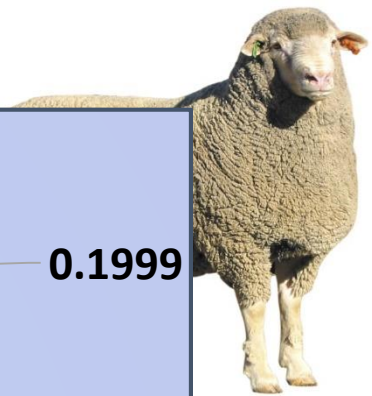


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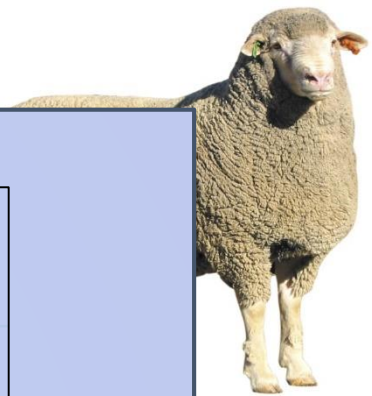


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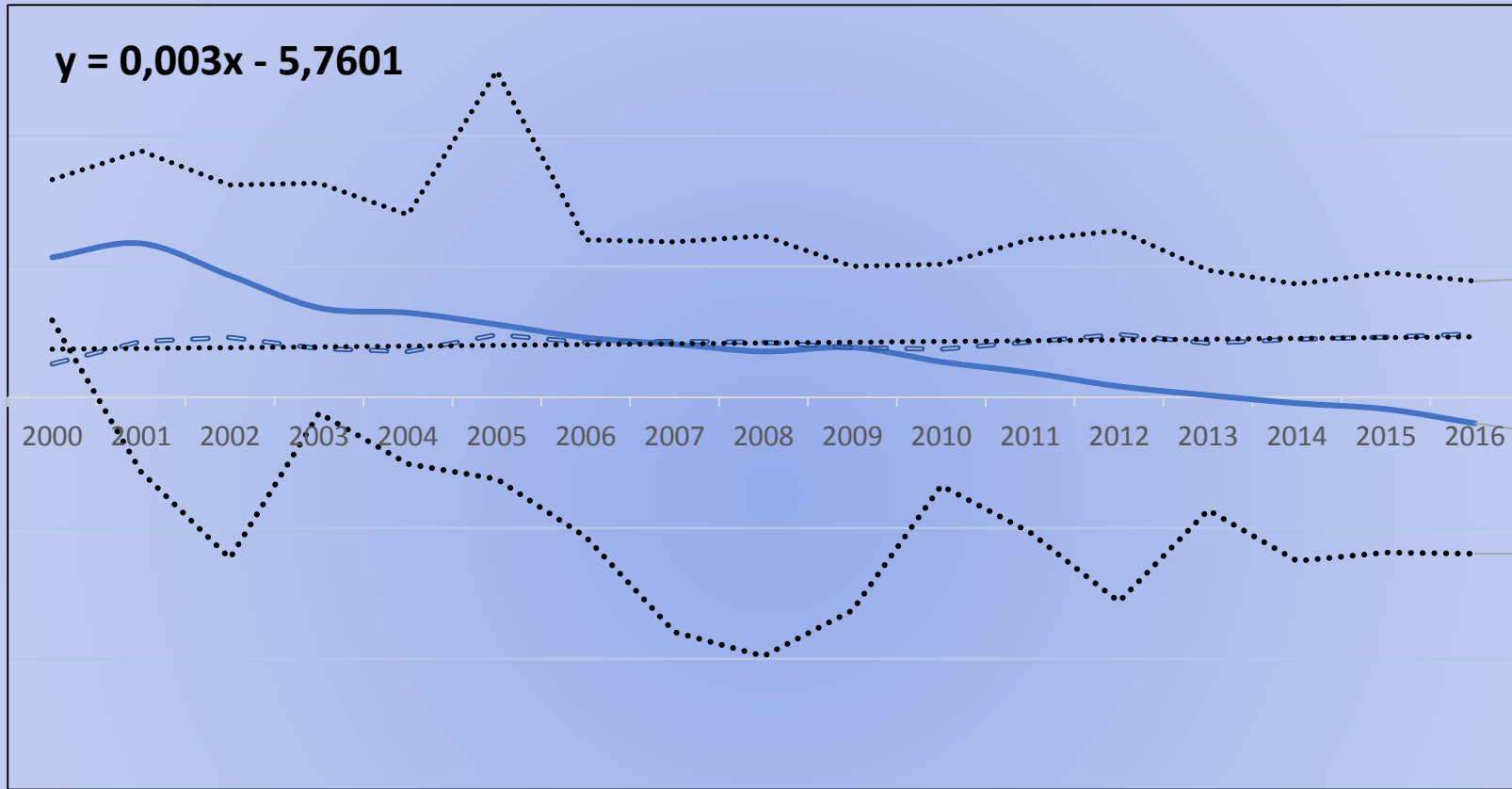




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12 MONTHS FIBRE DIAMETER (MICRON)



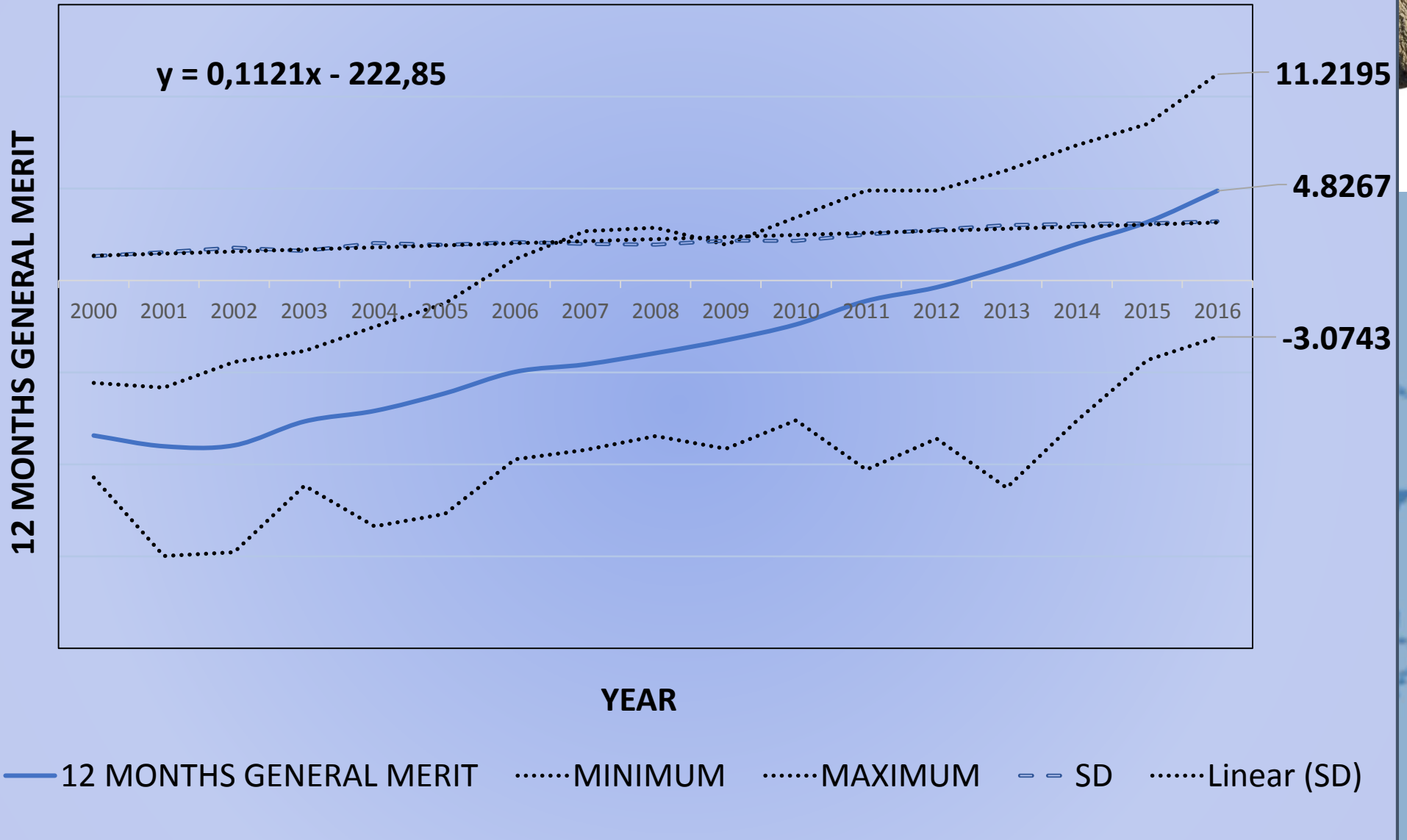
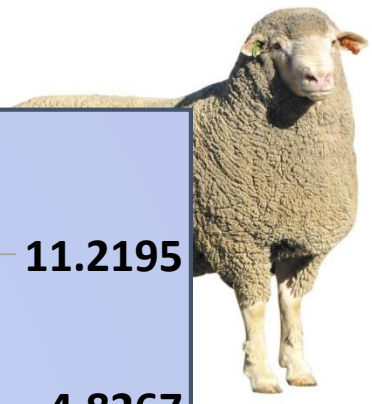
0.4440
-0.0991
-0.5980

YEAR

— 12 MONTHS FIBRE DIAMETER MINIMUM MAXIMUM - - SD Linear (SD)

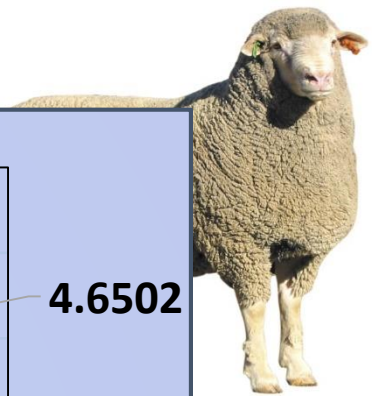


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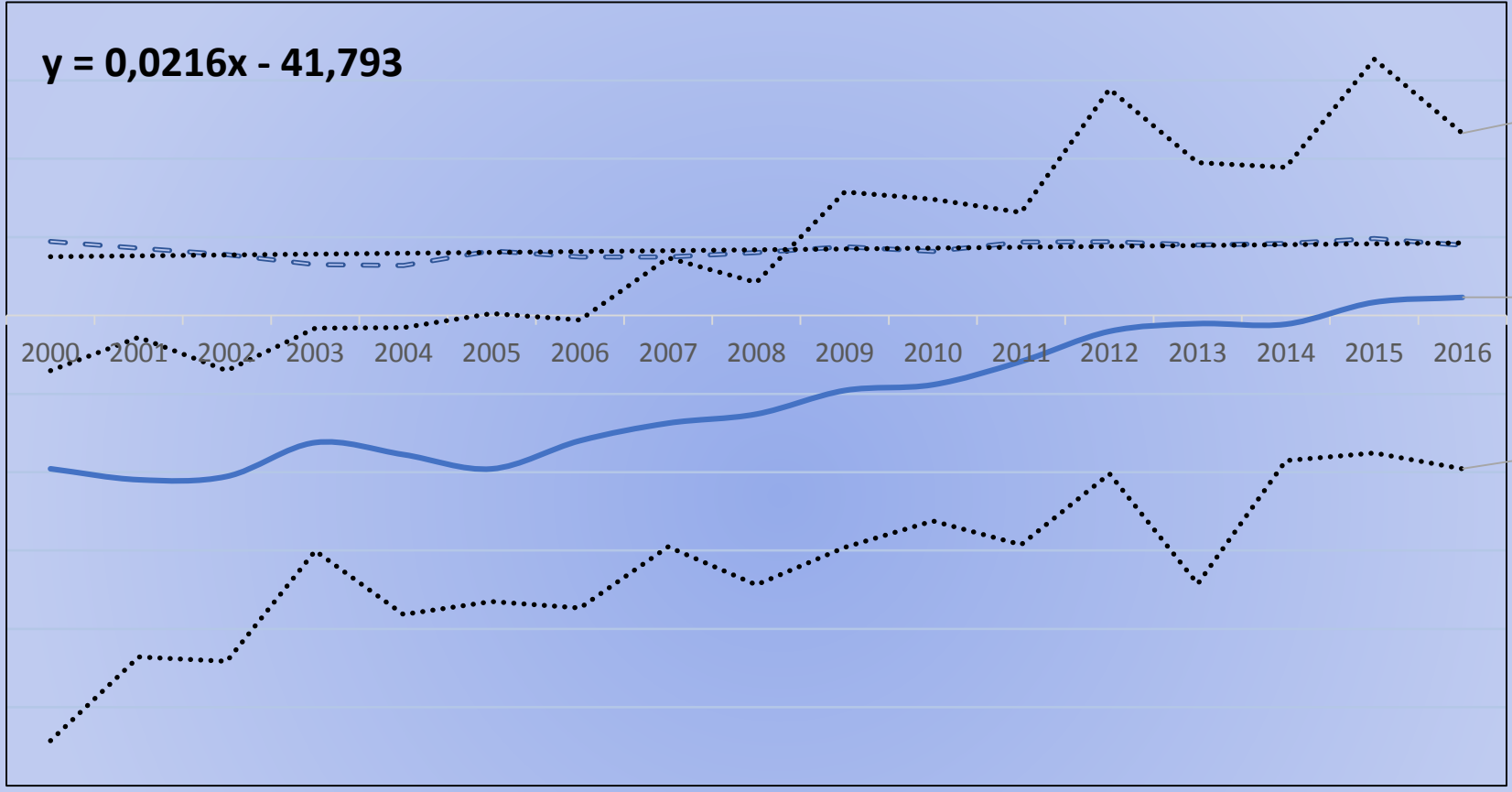




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LAMBS WEANED PER EWE LAMBED



4.6502

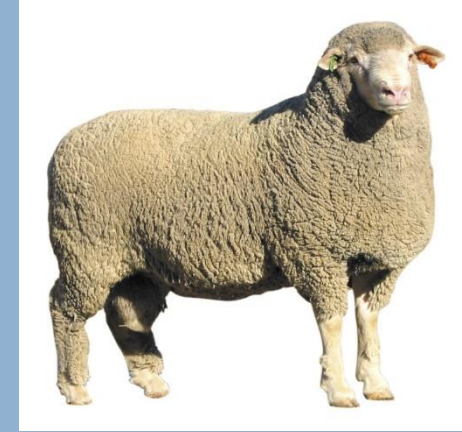
0.4638

-3.9111

— LAMBS / EWE LAMBED MINIMUM MAXIMUM - - SD Linear (SD)



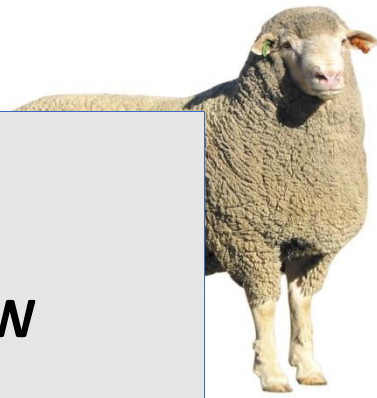
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EFFICIENCY OF STUDS TO FOLLOW THE GENETIC TREND

WEANING DIRECT	WEANING MATERNAL	12 MONTHS BODY WEIGHT	12 MTS CLEAN FLEECE WEIGHT	12 MTS FIBRE DIAMETER	12 MTS GENERAL MERIT	REPRODUCTION
69.28	53.43	70.52	54.36	72.31	63.75	73.92





CONCLUSIONS

1 PURSUING OF WEANING WEIGHT MATERNAL ABILITY (53.43%) IS LOW ON ACCOUNT OF RECENT IMPLEMENTATION AND LOW HERITABILITY

2 “HAND AND EYE” COMBINED WITH OBJECTIVE SELECTION, IS EXTREMELY EFFECTIVE TO CHANGE ADULT BODY WEIGHT

3 LOW VARIATION IN FIBRE DIAMETER WITH A HIGH PROPORTION GENETIC VARIANCE, CHANGED EFFECTIVELY

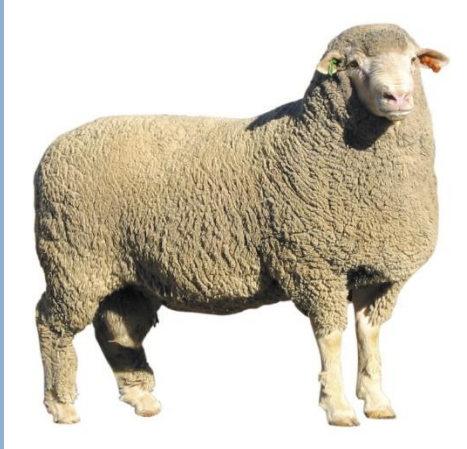
4 EFFICIENCY OF SELECTION FOR GENERAL MERIT (63.75%) INDICATE LARGE SCOPE USED TO IMPROVE FUNCTIONAL EFFICIENCY, REPRODUCTION AND TRAITS OF SPECIFIC IMPORTANCE TO INDIVIDUAL BREEDERS

5 THE SYSTEM UNEXPECTEDLY PROVED TO BE EXTREMELY EFFICIENT TO IMPROVE REPRODUCTION RATE (74 PERCENT)





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“THANK YOU FOR YOUR ATTENTION”



GJ Delport and JL Vosloo