



TEAM - 3 PROCESSING TRIAL

FINAL REPORT

Presented on behalf of
the TEAM-3 Steering

Committee by:

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1957 - 2004



Servicing the Wool Industry

Background



- **Participation:**
34 mills/topmakers from 11 countries
- **3 years to complete**
- **TEAM-3 = 647 consignments (3yrs)**
- **TEAM-2 = 603 consignments (7yrs)**
- **Trade Support is Acknowledged**

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Greasy Wool Characteristics

	Avg.	Min.	Max.
VMB (%)	1.2	0.3	5.3
MFD (um)	20.1	16.3	25.1
SL (mm)	85	64	104
SS (N/ktex)	38	24	51





Top Characteristics



	Avg.	Min.	Max.
Hauteur (mm)	72	56	91
CV of Ha (%)	45	33	58
Romaine (%)	9.3	2.3	19.5
MFD (μm)	20.3	16.3	25.4

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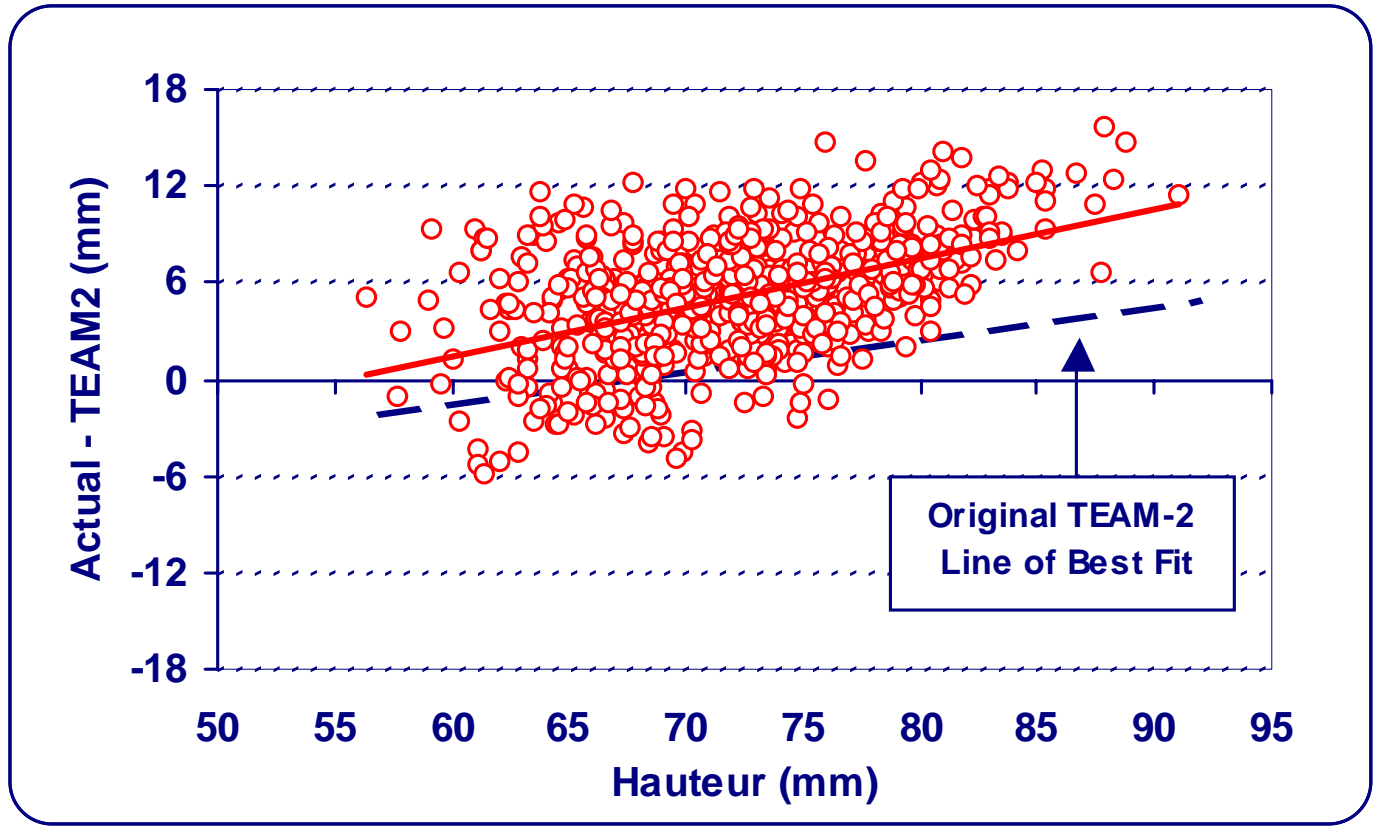
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- **Changes in Mill Processing Performance**
 - **Longer Hauteur (5.1 mm)**
 - **Lower CVH (2.5 %)**
 - **Higher Romaine (2.1 %)**





TEAM-2 Hauteur Differences



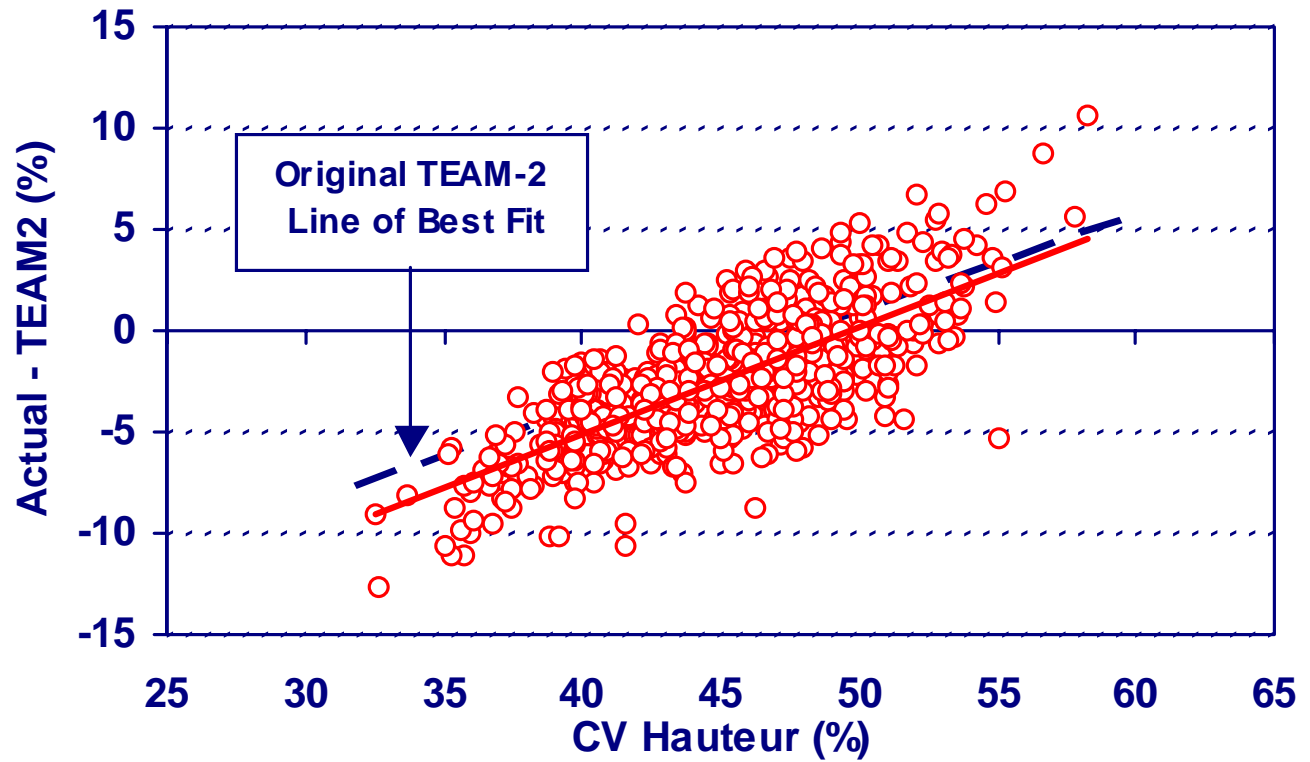
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TEAM-2 CV Hauteur Differences



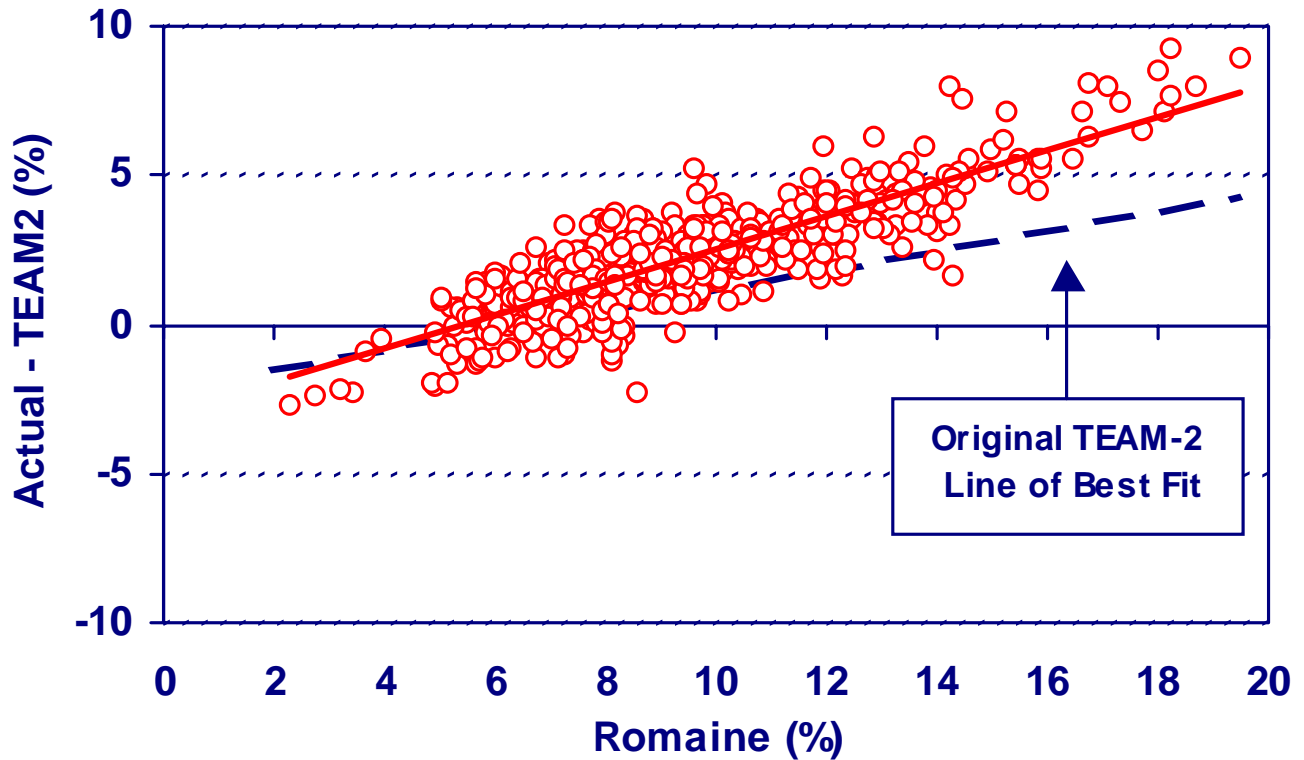
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TEAM-2 Romaine Differences



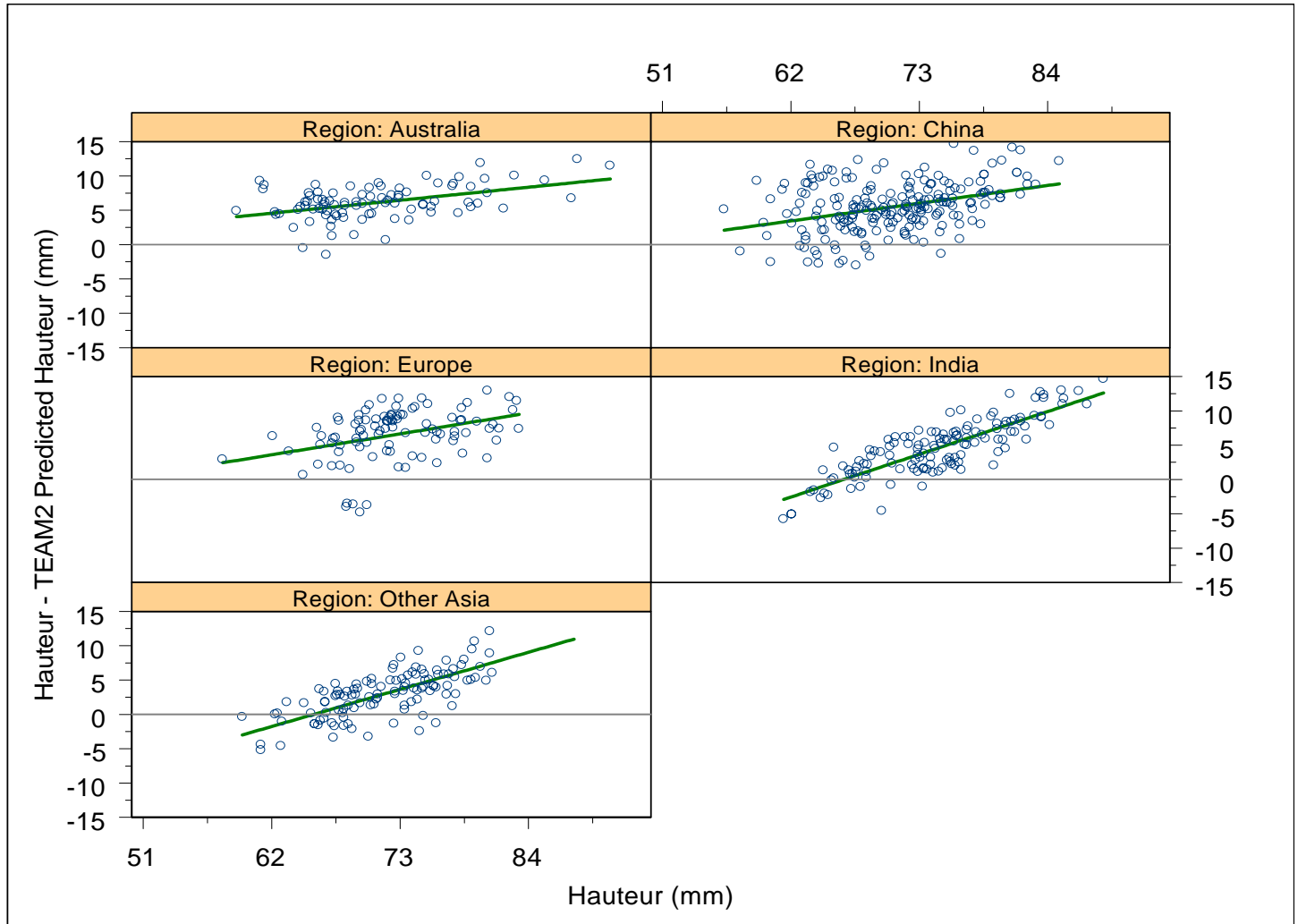
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Regional Comparison TEAM-2 Ha



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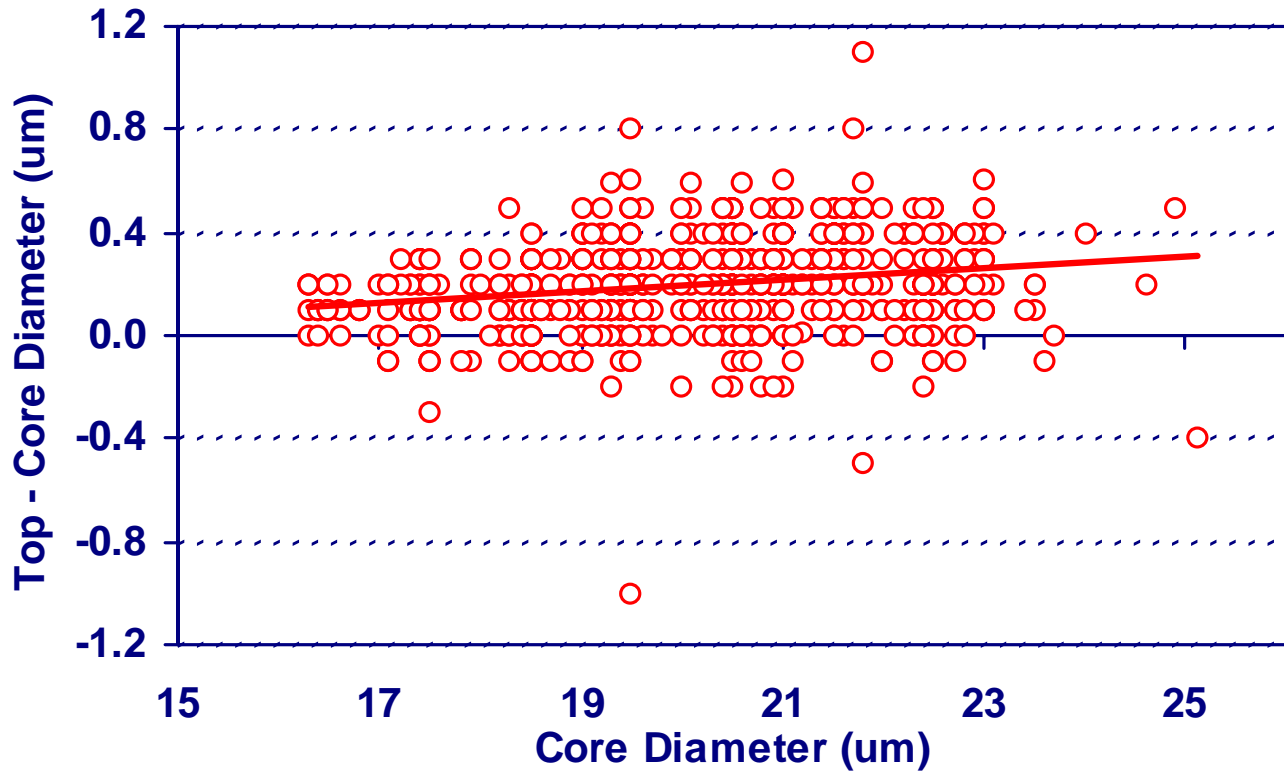


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TEAM-3 Core/Comb Diameter (MFD)

TEAM3
TWO IS INCLUDING ADDITIONAL MEASUREMENTS



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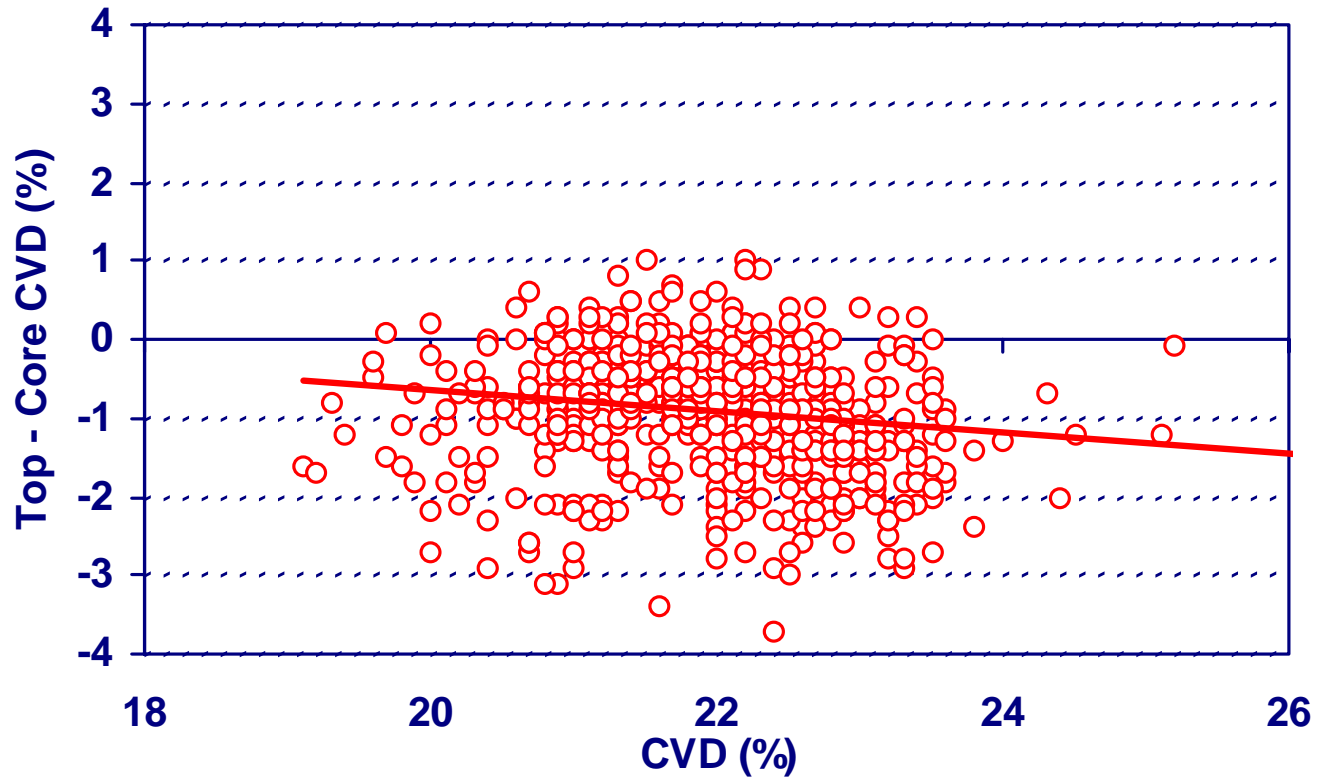


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TEAM-3 Core/Comb CV Diameter

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TOTAL INCLUDING ADDITIONAL MEASUREMENTS



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Is TEAM-2 Still Relevant?

	SL	SS	D	V	M*
TEAM-2	0.52	0.47	0.95	-0.45	-0.19
SE = 3.4 mm		R² = 84 %			
TEAM-3	0.58	0.45	1.00	0.03	-0.17
SE = 2.6 mm		R² = 82 %			
But VM Coefficient not statistically significant					



Review of VM Coefficient Background



- Commercial Expectation that Hauteur should decrease as VM increases (**negative coefficient**)
- TEAM-2 = - 0.45 mm per 1% VM
- TEAM-3 = + 0.03 mm per 1% VM
- But range in VM much lower in TEAM-3 compared to TEAM-2

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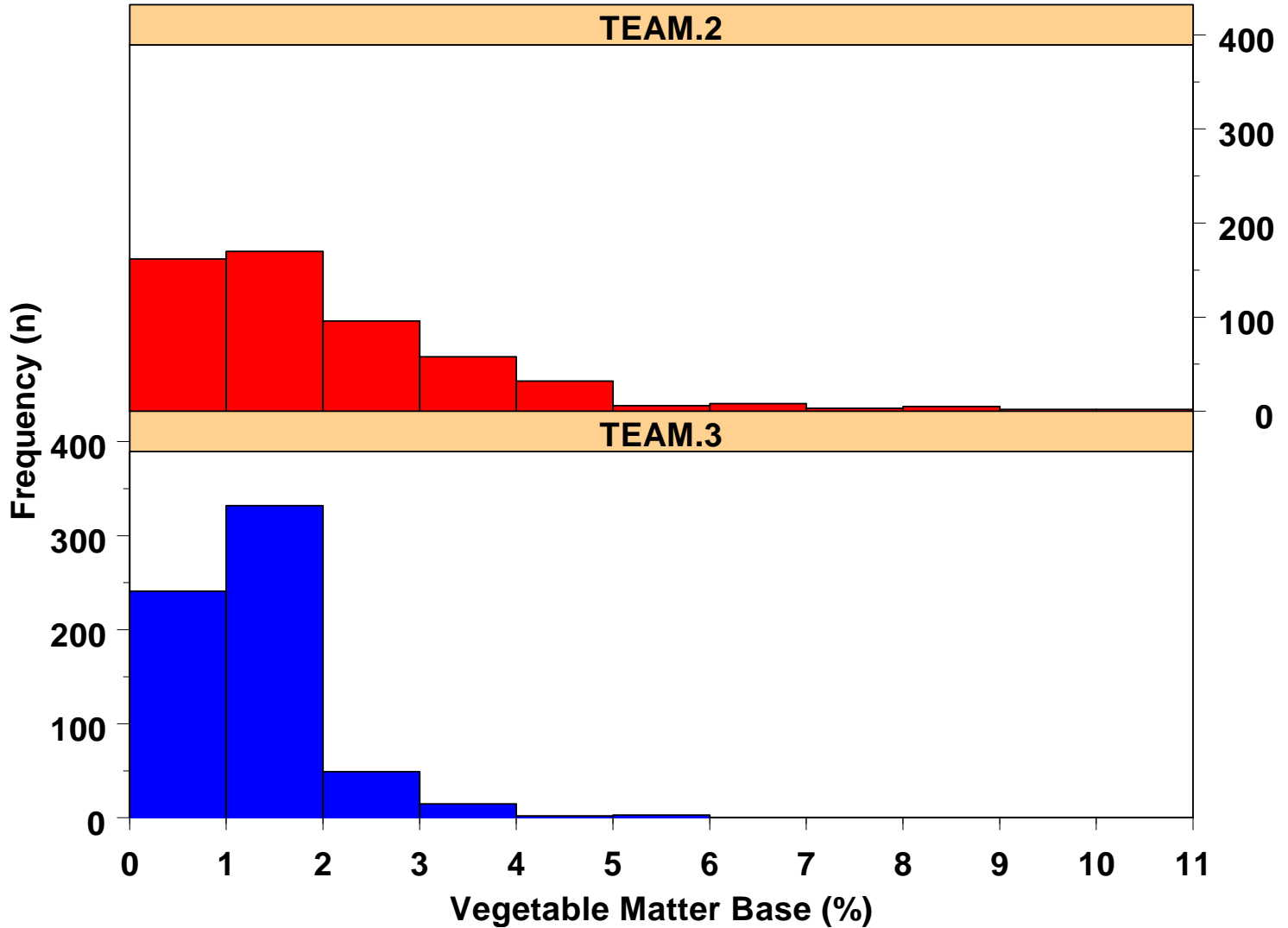
Review of VM Coefficient VM Distributions

TEAM3
TOTAL INCLUDING ADDITIONAL MEASUREMENTS

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Review of VM Coefficient Re-Analysis

TEAM₃
TOTAL INCLUDING ADDITIONAL MEASUREMENTS

- Re-analysed TEAM-2 database by restricting range in VM to match TEAM-3 range.
- The coefficient for VM became positive similar to TEAM-3.
- **Authors concluded that the range in VM in TEAM-3 was the cause of the unexpected result and that the TEAM-2 VM coefficient should be retained.**

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TEAM-3 Analysis Outcomes

New Measures



- **New Measurements Investigated**
 - CV of Diameter
 - Mean Fibre Curvature
 - CV Staple Length
- **Fibre Curvature had little impact**
- **CVD and CVL improve prediction model (lower SE and higher R^2)**

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Proposed New TEAM-3 Formula

- **Add:**

- CV of Diameter
- CV of Staple Length

- **Simplify:**

Use M instead of M*

- **VM:**

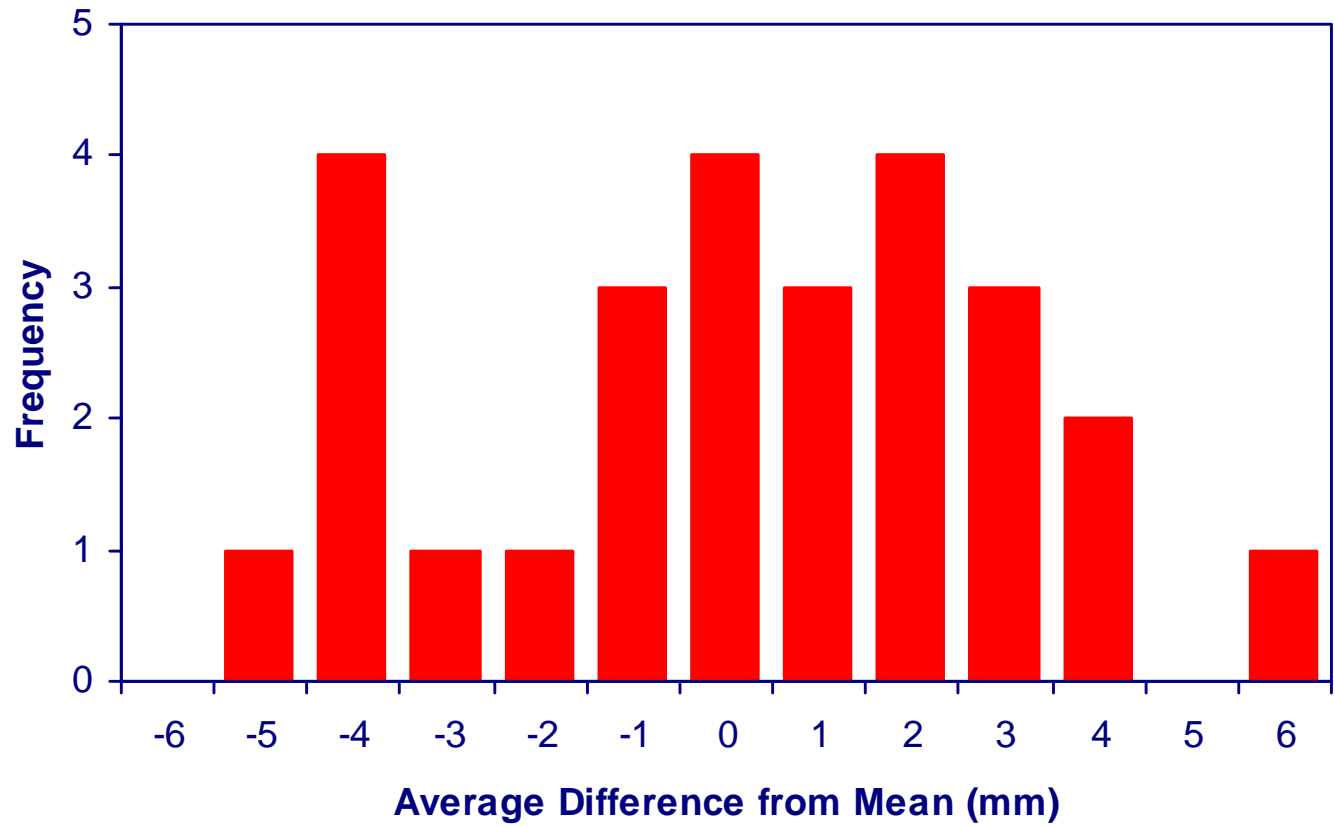
Use TEAM-2 coefficient (-0.45)

- **Hauteur:**

$$H = 0.43L + 0.35S + 1.38D - 0.15M \\ - 0.45V - 0.59CVD - 0.32 CVL + 21.8$$



Individual Mill Adjustments



Variability Within Mills

	TEAM-2	TEAM-3
<u>Average SD</u>	<u>3.5</u>	<u>2.4</u>
Minimum	2.3	1.3
Maximum	4.6	3.7
No. of Mills	20	27



Other Prediction Formulae

- **CVH**

$$= 0.30L - 0.37S - 0.88D + 0.17M \\ + 0.38CVL + 35.6$$

- **Romaine**

$$= - 0.13L - 0.18S - 0.63D + 0.78V + 38.6$$



IWTO – Evian, May 04

- Proposed TEAM-3 Formulae were accepted as technically correct by Technology & Standards Committee pending clarification of the role of the VM coefficient.
- To allow National Committee's time to consider the 3 options that have been proposed, the decision by Commercial Regulations & Contracts Committee was scheduled to be finalised in Hobart.

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TECHNOLOGY EVALUATING ADDITIONAL MEASUREMENTS

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Commercial Regulations & Contracts Committee

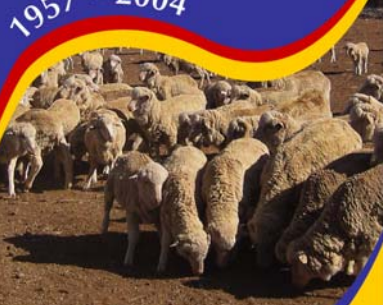
- **3 Options for Staple Test Regulations**

1. No change

2. TEAM-3 formulas to replace TEAM-2

3. Include both TEAM-2 and TEAM-3

- **Ensure industry consultation before making any decision**



Option 1: TEAM-2 only



- Improvement in prediction small
- Mill adjustment using T2 may suffice
- Easiest solution & minimal disruption
- No changes - databases, LC's, specs

BUT

- Processing conditions have changed
- Extensive trial unlikely to be repeated
- Use of M* prevents simple hauteur combinations

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Option 2: TEAM-3 only



- Better reflection of current processing
- Small benefit of CVD & CVL
- Will cope with future adjustments
- Remove complication of M*

BUT

- Disruption to databases, LC's, specs
- Extensive education campaign
- Use of minor terms may lead to over specification of deliveries



Option 3: TEAM-2 & TEAM-3

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THINK INCLUDING ADDITIONAL MEASUREMENTS

- Would allow mill to choose formulae that suits them best
- Consistent with Core Test Regulations – multiple Yield formulae

BUT

- Two sets of prediction formulae may cause confusion
- Potential for arbitrage

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Decision in Hobart



A decision will be taken in the IWTO Commercial Regulations and Contracts Committee in Hobart.

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TEAM REPORTS AVAILABLE ON THE WEB AT www.awta.com.au



Team 3



Team 1, 2, & 3

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THANK YOU FOR YOUR ATTENTION

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