



CRC

for

Premium

Quality

Wool

Prediction in the Mill Environment

Produced for the CRC for Premium Quality Wool undergraduate program by;
Ms. J. Turk, G.H. Michell & Sons Pty Ltd.



G.H. Michell & Sons' Story

- History
- Location
- Philosophy
 - invest in the future
 - buy the best wool
 - process to customer specs
- Customers
 - requirements
 - evolving needs

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Development of Metrology

- **Objective Measurement**
 - replaced Subjective Appraisal
 - traditional expertise lost
- **Tighter product specification**
 - more demanding technology
 - result of objective measurement
 - meet specs at least cost
- **Product guarantee**
 - claims
 - cost impetus
 - small margins

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Prediction at Michell & Sons

- part of TEAM I development
- part of TEAM II development
 - inclusion of POB
- database
 - constantly updated
- Michells use standard TEAM II formula
- mill correction factor
 - different mills
 - different lines

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Adoption of Prediction

- **Dedication**
 - Michells experience
 - database development
 - 15M kg per year throughput
- **Technical Expertise**
 - commercial knowledge
 - belief in prediction
- **Computer power**
 - not easy to apply
 - getting better every year

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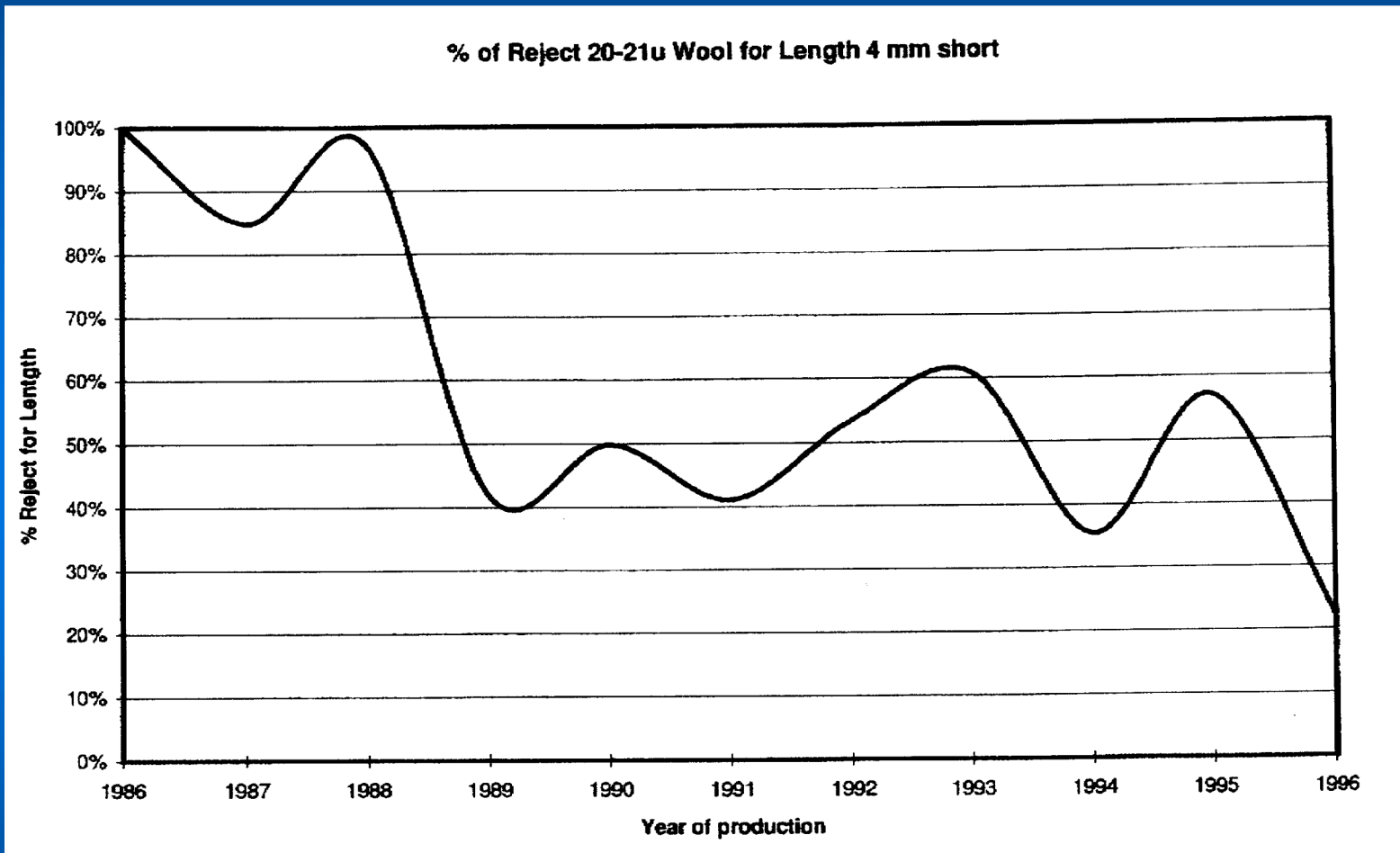
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Proof

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result: higher price for tested wool



Spinners' Requirements

- **Diameter**
- **Hauteur**
- **CV Hauteur**
 - short fibres
- **Evenness**
 - affects fabrics
- **Wax / Oil content**
 - minimise wax
 - spinning oils
- **Moisture / Regain**
 - invoice mass
- **Clarity**
 - VM
 - neps
 - slubs
- **pH**
 - important for acid dyeing
- **Coloured Fibre**
 - affects final product

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Summary

- **Contract Specifications**
 - customer driven
- **Prediction**
 - vital in meeting specs
 - confidence
 - least cost consignments
- **Production Efficiency**
- **Waste Minimisation**

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Further Developments

- **Non-conforming batches**
 - under or over perform
 - why?
- **TEAM II**
 - adequate for current needs
 - more variables
 - style?
 - curvature?
 - more predictable
 - more accurate

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