

Export and Domestic Scaling in New Zealand



SOME NZ FORESTRY FACTS

- 19.8 million m³ cut in 06/07
- 6.3 million m³ logs exported
- 1.87 million ha radiata pine
- 2.1 million ha plantation

EXPORT SECTOR ERODED BY:

- High dollar (NZ\$0.76 USD)
- Freight rates (>\$70/tonne)
- Availability of shipping

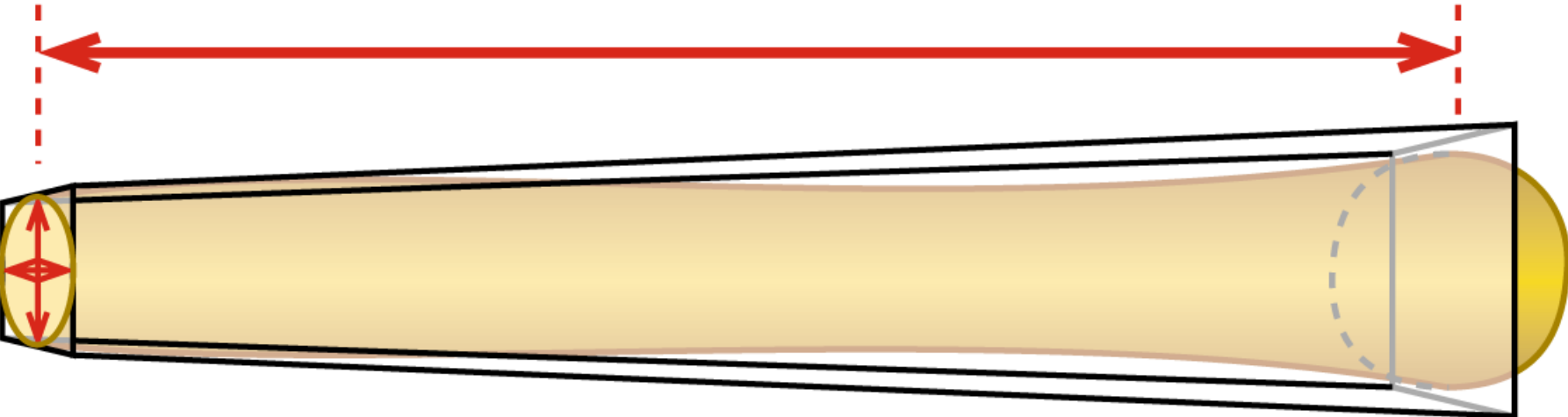
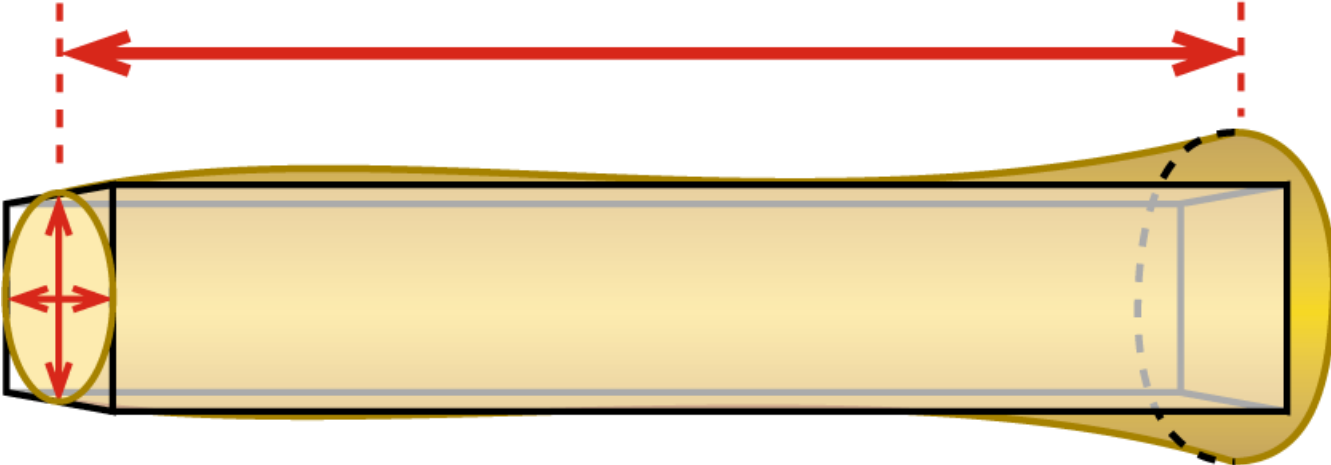
Scaling methods in NZ

- Export logs scaled in JAS
- Domestic logs weigh-scaled or sold in tonnes
- Voluntary standard

Japanese Agricultural Standard (JAS)



**JAS
volume**



JAS

Measurements

- Shortest small-end diameter through centre of sawn end
- Second diameter at right angles to first
- Round down to even centimetre
- < 14 each centimetre rounded down
- Allow for end conditions

Fig. 7: Trumpet. Small-end diameter is reduced to exclude swelling.



Fig. 11: Small-end swelling with bark-encased knot. This does not affect measurement, but swelling and fluting do.



*Fig. 13: Small-end swelling with intergrown knot.
Swellings are excluded from measurements.*



Fig. 27: Broken end. Exclude broken piece because it extends more than 10 cm into the log.







Toll Owens

- 5.1 million m³ export logs
- 13 sites
- 95 scalers
- 49 scaler/operators

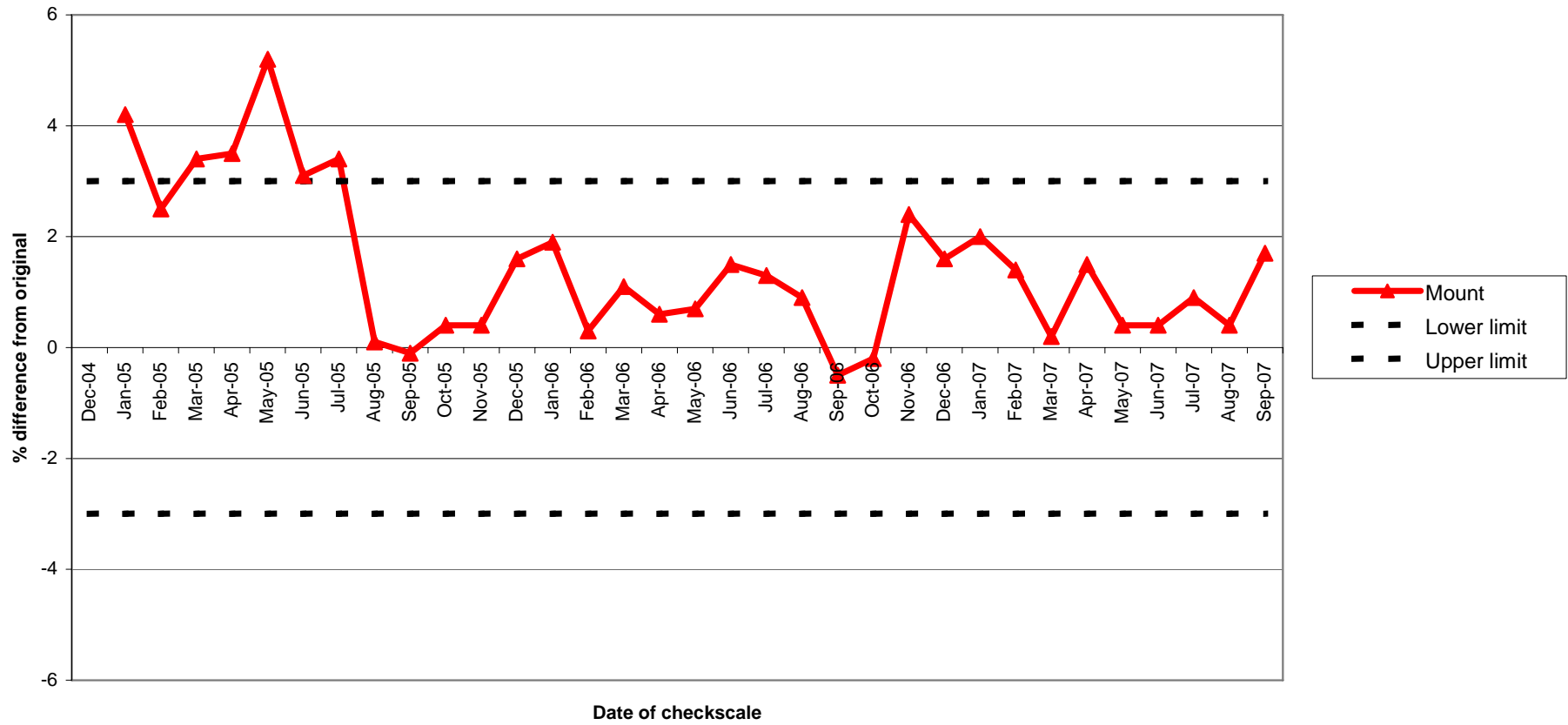
Statistical QC System

- Check scalers at each location
- Monthly random samples
- Feedback to scalers
- Each scaler monitored
- 3 month calibration check

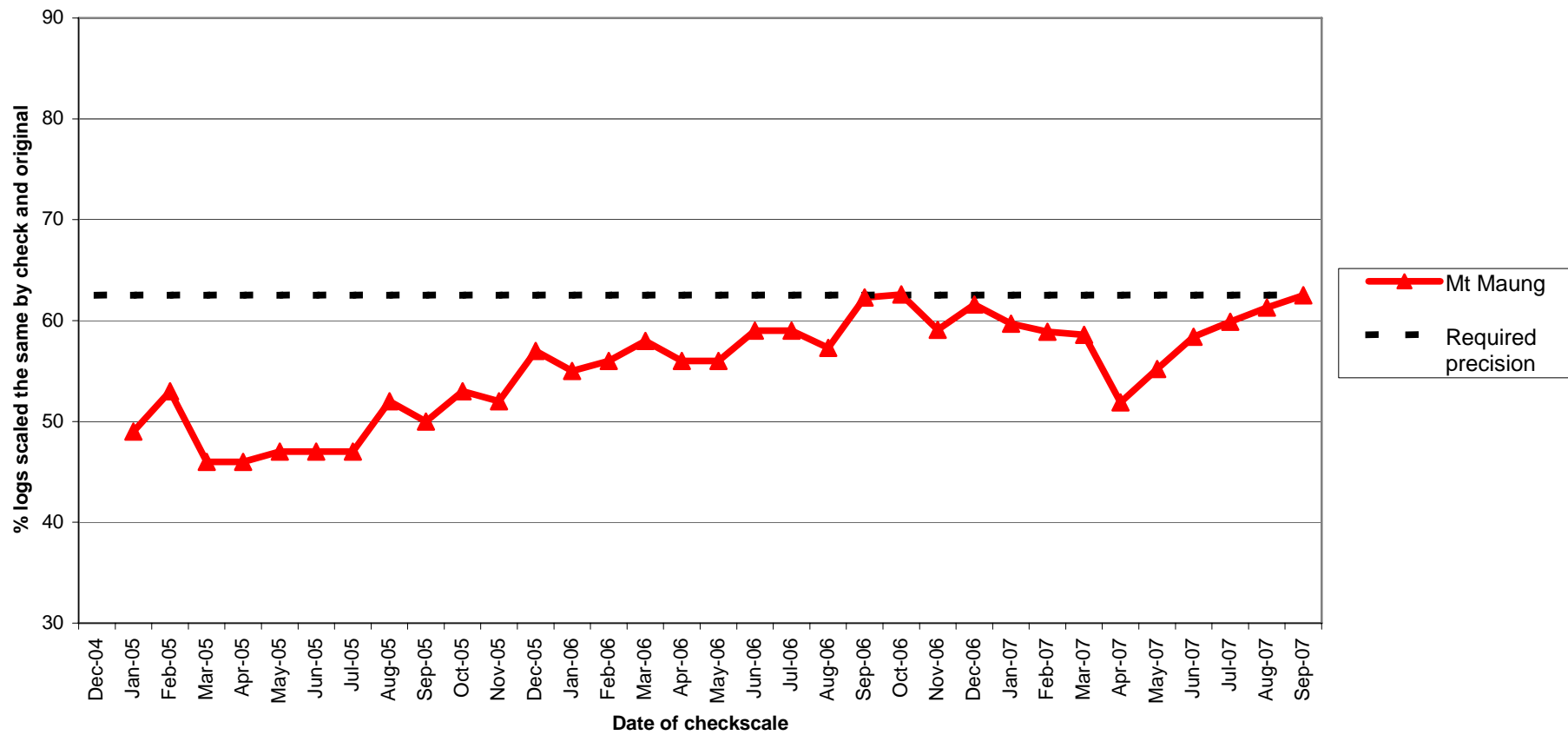
Accuracy criteria

- Volume bias within 3%
- Scalers should agree on diameters of 62.5% of small-ends
- 95% of logs should be scaled within 2 cm

Volume variation Mount Maunganui



Scaling precision Mount Maungui



3D Scaling

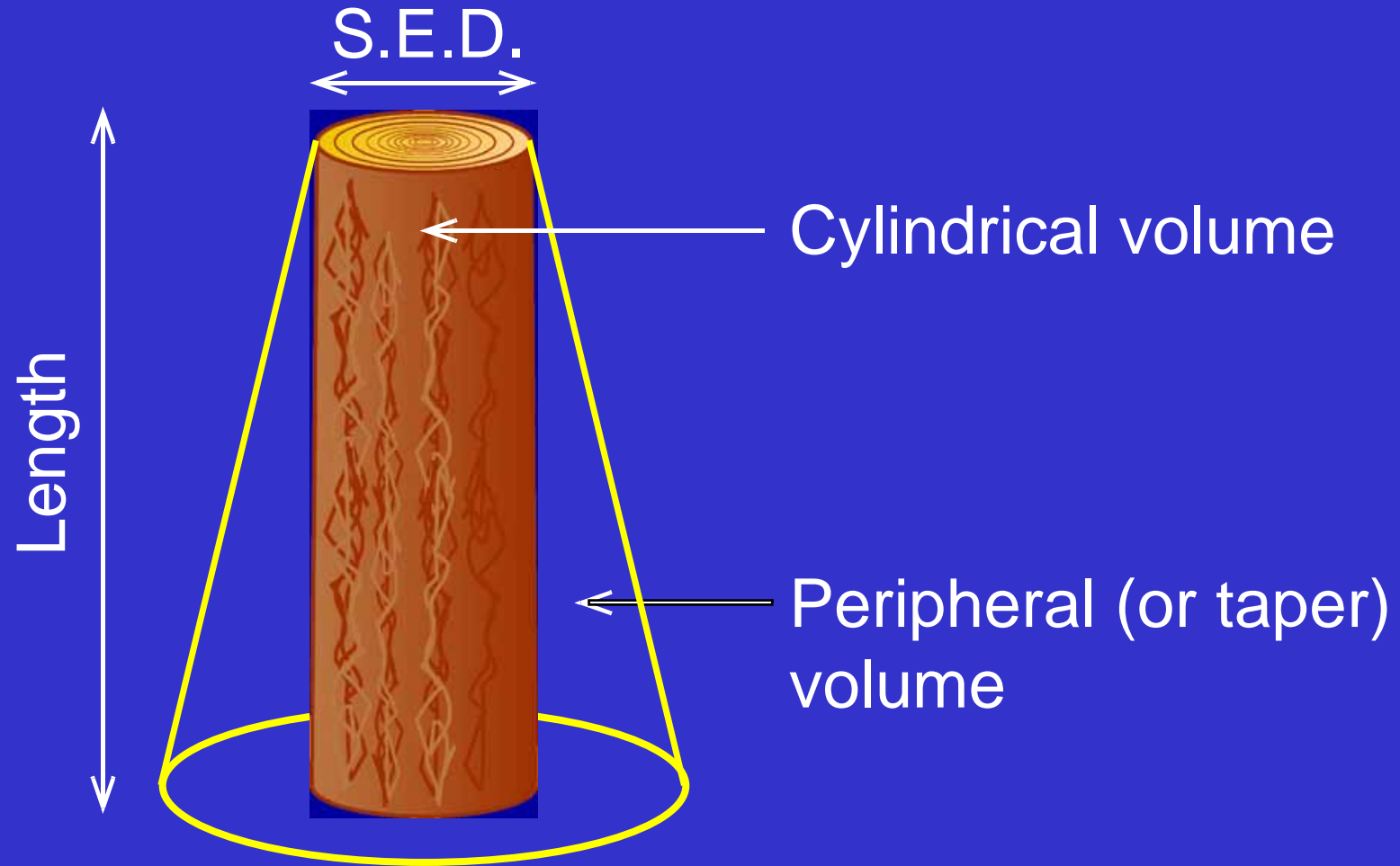


3 D Scaling

- Weigh scale samples
- Valuable logs
- Both end diameters and length

3D formula

Volume components of log



Domestic scaling



3D

Measurements

- Shortest diameter through centre of both sawn ends
- Second diameter at right angles to first
- Round to nearest centimetre
- No reduction for butt flare
- “Shortest” length to nearest centimetre

Domestic scaling requirements

- Done by a variety of contractors
- Each scaler to sit “domestic “ scaling module
- Must scale 50 logs by the 3D scaling method and be within 1% of assessors volume

