

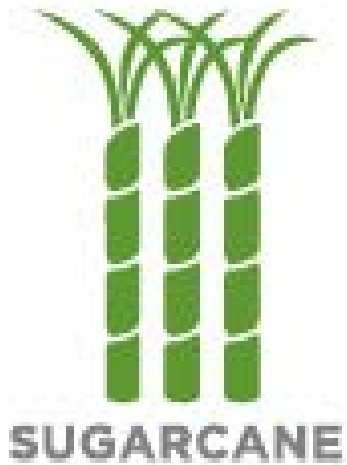


*“How UCL
handled their big
Midlands crop”*



RB Lütge

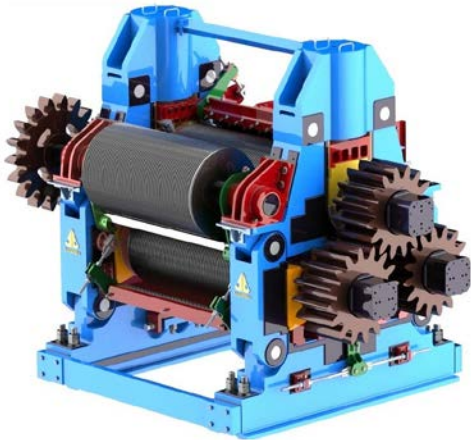
WHAT'S THE PROBLEM?



1 175 000t of cane from 10 crushers

375 000t

800 000t normal crush capacity



UCL Diversion History (tons)

| | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
|--------------|----------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|---------------|
| GLEDHOW | 90,066 | 8,060 | | | | | 2,653 | 5,840 | |
| MAIDSTONE | 71,221 | 63,027 | | 5,505 | | 9,647 | 40,187 | 3,587 | 3,637 |
| NOODSBERG | 72,409 | 858 | 40,763 | 47,190 | 12,926 | 133,298 | 245,263 | 151,737 | 21,488 |
| AMATIKULU | | | | | | | | | |
| DARNALL | | | | 266 | | 2,169 | | 804 | |
| ESTON | | | | | | 986 | | | |
| SEZELA | | | | | | 279 | 5,988 | | |
| TOTAL | 233,696 | 71,945 | 40,763 | 52,960 | 12,926 | 146,378 | 294,091 | 161,967 | 25,125 |

**Diversions have always been the
'go to' option**

SO WHAT'S CHANGED?

1

Umzimkulu and Darnall mill closures

2

New cane varieties

- **Greater yield**
- **Greater farm area harvested annually**

| 2004 | |
|---------|---------|
| Variety | % crush |
| N12 | 55.37% |
| N16 | 33.31% |
| N31 | 2.68% |
| N21 | 2.67% |
| N25 | 1.09% |
| N29 | 0.97% |
| N19 | 0.71% |
| N11 | 0.60% |
| Mixed | 0.59% |
| N23 | 0.53% |
| N26 | 0.50% |
| OTHER | 0.57% |
| N36 | 0.16% |
| N22 | 0.14% |
| N27 | 0.12% |

| 2020 | |
|---------|---------|
| Variety | % crush |
| N48 | 25.4% |
| N12 | 20.5% |
| N54 | 15.7% |
| N37 | 5.6% |
| N31 | 5.6% |
| N52 | 4.7% |
| N39 | 4.7% |
| N41 | 3.8% |
| N35 | 3.0% |
| N16 | 2.0% |
| N61 | 0.9% |
| N36 | 0.7% |
| N50 | 0.3% |
| N51 | 0.2% |
| N64 | 0.2% |



-35%



-31%

SO
WHAT'S
CHANGED?

1

Umzimkulu and Darnall mill closures

2

New cane varieties

3

Decent climatic conditions

intervention #1



- Early start on 14 Feb**
- **Short 8-week off-crop**

Cost of shorter off-crop

- Additional gantry crane to allow parallel Diffuser and mill work – **R800k**
- Purchased additional Mill and other critical spares instead of refurbishing existing – **R500k**
- Additional Mobile crane hours on site – **R100k**
- Additional man hours – **R250k**

R1.65m

intervention #1



Early start on 14 Feb

- Offered R200/tRV to start early

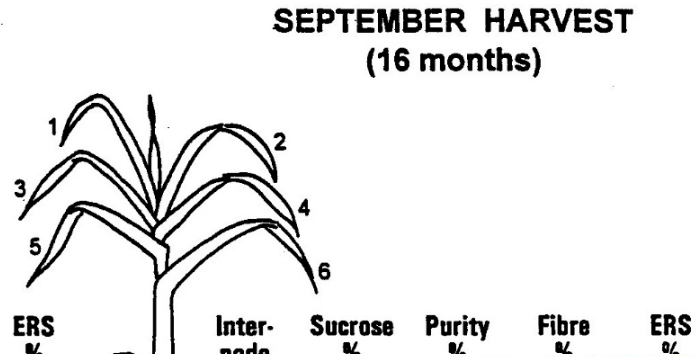
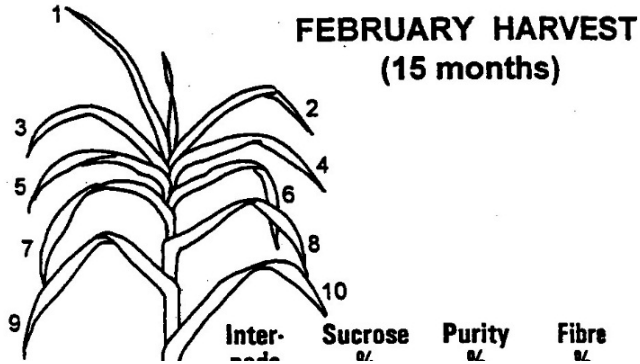
-34 000t

intervention #2



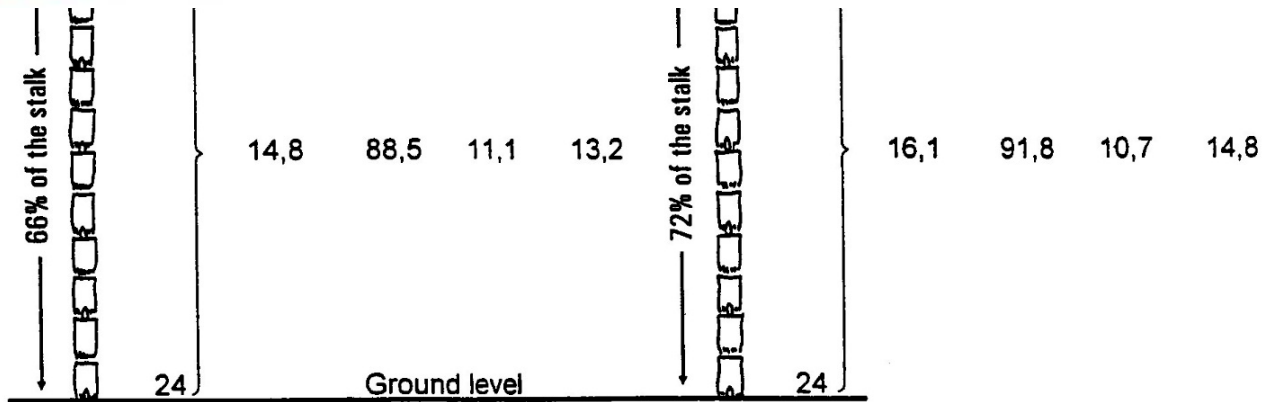
- ## **Topping Restrictions**
- Chasing reduced tonnage
 - Minimal literature





| | | | | | | | | | |
|-------------|-----------|----------|---------|-------|-------------|-----------|----------|---------|-------|
| Inter-nodes | Sucrose % | Purity % | Fibre % | ERS % | Inter-nodes | Sucrose % | Purity % | Fibre % | ERS % |
|-------------|-----------|----------|---------|-------|-------------|-----------|----------|---------|-------|

OUTDATED





Assumed RV price R4,150
 Average input RV 12.91%

| SECTION cm | Proportion of mass | Proportion of mass | MASS t/Ha | POL% | Non-POL | BRIX | PURITY | FIBRE | MOIST | RV % | RV tons | VALUE R/t |
|---------------------|-----------------------|-----------------------|--------------|----------------|--------------------|-----------------|---------------|----------------|-----------------|---------------|-------------|----------------|
| m-10 | 4.27% | | 3.18 | 1.11 | 4.95 | 6.06 | 18.32 | 9.05 | 84.89 | -1.02% | -0.03 | -R42.33 |
| 10-20 | 5.08% | | 3.79 | 2.31 | 4.39 | 6.7 | 34.48 | 9.04 | 84.26 | 0.40% | 0.01 | R16.60 |
| 20-30 | 5.67% | 6.26% | 4.23 | 4.62 | 4.22 | 8.84 | 52.26 | 8.92 | 82.24 | 2.78% | 0.12 | R115.37 |
| 30-40 | 5.93% | 6.54% | 4.42 | 7.48 | 3.86 | 11.34 | 65.96 | 9.07 | 79.59 | 5.96% | 0.26 | R247.34 |
| 40-50 | 5.81% | 6.41% | 4.33 | 8.86 | 3.96 | 12.82 | 69.11 | 9.04 | 78.14 | 7.12% | 0.31 | R295.48 |
| 50-60 | 5.70% | 6.29% | 4.25 | 9.86 | 3.65 | 13.51 | 72.98 | 9.99 | 76.5 | 8.23% | 0.35 | R341.55 |
| 60-70 | 6.34% | 7.00% | 4.73 | 11.58 | 3.02 | 14.6 | 79.32 | 11.36 | 74.04 | 10.17% | 0.48 | R422.06 |
| 70-160 | 61.20% | 67.51% | 45.63 | 14.42 | 2.1 | 16.52 | 87.29 | 12.53 | 70.95 | 13.34% | 6.09 | R553.61 |
| TOTAL Sta | 100% | | 74.56 | 11.51 | 2.82 | 14.32 | 76.04 | 11.37 | 74.30 | 10.18% | 7.59 | R422.45 |
| | | | | Avg Pol | Avg Non-Pol | Avg Brix | AvgPty | Avg Fib | Avg Mois | Avg RV | | Avg R/t |
| TOPPED Stalk | | | 67.59 | 12.51 | 2.63 | 15.14 | 81.08 | 11.61 | 73.25 | 11.25% | 7.61 | R467.08 |

Local trial

- Dave Wilkinson
- Friedel Eggers
- Craig Breetzke

Conclusion

Only growers within 5km from the mill lose up to R75 per ton at 30cm

| Trial info & data | | | | | RV price | |
|-------------------|---------|-------|-------|-------|----------|---------------|
| Noodsberg | | | | | May-20 | RV Income |
| Var | Trt | RV% | TCH | TRVH | (R/t) | (R/ha) |
| All | Control | 11.37 | 93.23 | 10.60 | 4525.34 | 47,970 |
| All | 15 cm | 12.64 | 83.90 | 10.60 | 4525.34 | 47,991 |
| All | 30 cm | 13.37 | 77.36 | 10.34 | 4525.34 | 46,806 |

intervention #2



Topping Restrictions

- Chasing reduced tonnage
- Minimal literature
- Minimum 30cm top
- R40 per ton RV to growers

Compliance RULES



- Must top a minimum of 30cm below the growing point.
- Deliveries will be monitored both at the weighbridge, cane yard and infield. Any poorly topped load in any of these areas will trigger a compliance warning.
- A grower will be allowed two warnings. Each warning will, however, cover all cane already loaded on to trailers. In other words, the second warning already on a road will not trigger a second warning. This does not apply to unloaded cane as the grower has the opportunity to correct the topping.
- A third incident will result in that load and all other cane emanating from the current field, whether in field or on trailers, being rejected until corrective measures are in place.
- If a grower goes for 10 weeks without receiving a warning, then all existing warnings are cancelled and the process starts again.

MGB APPROVED

intervention #2

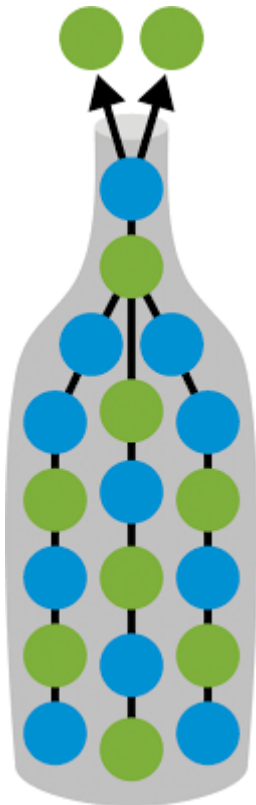


Topping Restrictions

10t/Ha =

-125 000t

intervention #3



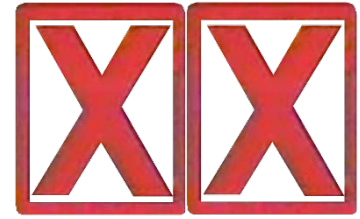
Increased throughput

Throughput enhancements

- Added back Cane knife previously removed in 2008
- Modified Shredder washboard
- New Diffuser screens to prevent in season failures
- Increased Exhaust steam pressure from 84 to 95kPa
- 3 year drive to improve OTE, focus on top 10 items
- Better quality cane due to topping = less issues in Front end

Major emphasis on cane quality

**Cane below 75%
but above 70% purity:**



- A grower delivering cane that has tested below 75% purity will receive a compliance warning. The warning will however, cover all cane already loaded into trailers.
- The second incident will result in all cane emanating from the current field, whether infield or in trailers, being rejected until corrective measures are in place.
- If a grower goes for 10 weeks without receiving a warning, then all existing warnings are cancelled and the process starts again.



Cane below 70% purity

- A grower delivering cane that has tested below 70% purity will result in all cane emanating from the current field, whether infield or in trailers, being rejected until corrective measures are in place, assuming this is possible.
- If a grower goes for 10 weeks without receiving a warning, then all existing warnings are cancelled and the process starts again.

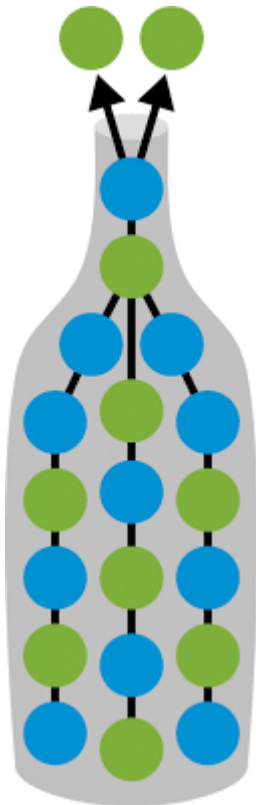
84 000t

| | | 2016 | 2017 | 2018 | 2019 | 2020 |
|----------------------------|-----------|---------|---------|---------|---------|---------|
| | | to date | | | | |
| Tons cane crushed | TD | 522,514 | 605,273 | 598,883 | 575,583 | 659,848 |
| Overall time efficiency | TD | 81 | 87 | 87 | 87 | 91 |
| Suc % cane | TD | 13.26 | 14.02 | 13.88 | 13.97 | 13.21 |
| Fibre % cane | TD | 13.95 | 13.37 | 13.74 | 13.63 | 13.21 |
| RV % cane | TD | 11.87 | 12.77 | 12.82 | 12.83 | 11.89 |
| Cane to sugar ratio | TD | 8.93 | 8.25 | 8.51 | 8.55 | 8.87 |
| Sucrose extraction | TD | 96.22 | 96.99 | 96.11 | 96.17 | 96.20 |
| Pol factor | TD | 98.73 | 98.81 | 99.22 | 98.69 | 99.17 |
| Suc boiling house recovery | TD | 87.37 | 88.70 | 87.68 | 86.64 | 88.37 |
| Suc overall recovery | TD | 84.07 | 86.03 | 84.27 | 83.32 | 85.01 |
| Cane Pty | TD | 86.13 | 87.55 | 86.92 | 86.09 | 86.94 |
| non Pol | TD | | | | | |



100 000t

intervention #3



Increased throughput

-51 000t

intervention #4



-48 500t

Completed to date

OUTCOME

| | |
|----------------------------|-----------------|
| Stand-over Potential | 375 000t |
| • Early start | -34 000t |
| • Topping restrictions | -125 000t |
| • Increased throughput | -51 000t |
| • Diversions | -48 500t |
| Current stand-over balance | 117 000t |

Other Considerations

- Room for possible reduction in estimates
- Possible late season diversions
- Good chance we will beat our crush target

Potential reduced stand-over tonnage 85 000t

- 50% of stand-over cane is less than 18 months old

2021 & **Beyond**

Repeat of successful interventions

**Mill expansion to crush additional
150 000t of cane**

