



(Far left) Herbert harvesting contractor Greg Chiesa.
(Left) Effective topping helps reduce extraneous matter, and improves CCS and sugar quality.

TOPPING: NOT JUST FOR ICE-CREAM

WITH THE SEASON UNDERWAY FOR ANOTHER YEAR, GROWERS AND CONTRACTORS ARE BEING REMINDED OF THE IMPORTANCE OF TOPPING CANE, BOTH FOR ACHIEVING CLEAN CANE SUPPLY AND FOR MAXIMISING CCS.

There are plenty of times when the topper on the harvester can't be used. When crops are lodged due to size or weather – or both – there is just no way of removing the tops from the cane.

However, there are other times when there is an opportunity to be grabbed by improving the use of toppers across the industry.

So what is in those tops, and what does it mean for the cane ending up in the bins?

The short answer is that topping cane has a significant positive impact on profitability. The issue with not topping is that tops increase extraneous matter (EM), decrease CCS and reduce sugar quality through increased colour, ash and starch.

Topping can also mean "losing a bit to gain a bit more".

Australian industry trials from 2002 indicated that although topping reduced total yield by 6 tonnes per hectare (t/ha), it resulted in an improvement in CCS of 0.6 units and growers' incomes increased by \$110 per hectare (\$/ha). In that trial, trash reduced by one percent and tops reduced by five percent.

Grower returns increased by greater than \$1 per tonne, although harvester returns reduced.

Another trial from 2012 also looked at the economics of topping versus not topping. The result (see table) was an improvement of \$165/ha for the grower.

SRA Adoption Officer for Harvesting, Phil Patane, said topping was just one part of the puzzle with finding the sweet spot to achieve optimum harvest outcomes. He added that it required a collaborative relationship between the contractor and the grower to make the most of the opportunity and to ensure harvester operators were also being rewarded for implementing best practice.

According to the SRA Harvesting Best Practice Manual (available via sugarresearch.com.au), cane should be topped at the growing point, as tops generally represent 40-45 percent of total extraneous matter. Phil said that removing tops also helps reduce the load on the extractors, which allows for improved cleaning, reduced cane loss and less wear and tear on the machine.

Herbert region harvesting contractor, Greg Chiesa, said it was important for

contractors to talk to growers about what they wanted.

"Obviously if the cane is laying down, there's no point running the topper, but if the cane is standing then we are running the topper and following the growers' instructions," he said. "There's no point sending tops through for no reason only to be trying to pull them out with the extractors."

Generally, only crops that are relatively even and erect can be topped effectively, with typical topping efficiency in a good erect crop being 75–85 percent.

While there have been attempts to automatically control topper height, they have not yet been successful. The operator must therefore manually control topper height, and make appropriate adjustments when the basecutting height is adjusted. ■

To receive a hard copy of the SRA Harvesting Best Practice Manual contact Samantha Ryalls on E sryalls@sugarresearch.com.au T 07 3331 3308.

| Treatment | Yield (T/ha) | Trash % | Tops % | CCS | Grower \$/ha |
|------------|--------------|---------|--------|-------|---------------------|
| Topped | 119.6 | 3% | 0.7% | 13.39 | \$4108 |
| Not topped | 125.1 | 4.2% | 5.4% | 12.77 | \$3943 |
| | | | | | \$165/ha difference |