



## CAN DO FOR CANPAC

*Kaizen blitz results at Fonterra subsidiary Canpac demonstrated that changeover times could be cut by 50%, exceeding the improvement target of 30%. John Chase, CCI business consultant, New Zealand and Glenn Laing of Fonterra give the low-down.*



- *Kaizen blitz results demonstrated that changeover times could be cut by 50%, exceeding the improvement target of 30%*
- *If reference change and seamer changeover times are maintained consistently at levels demonstrated during the blitz, production can be upped by 20%*
- *Seamer changeovers were believed to have averaged 8 hours, while only 3 hours was noted during a blitz trial*



A global top ten dairy company, New Zealand's Fonterra is the world's leading dairy exporter, responsible for more than one-third of international dairy trade. It's owned by more than 11 000 New Zealand dairy farmers and has a combined output capacity of more than 14 billion litres of milk each year.

Wholly owned subsidiary Canpac manufactures and prints can packaging for a wide range of dairy-based fast moving consumer goods. Vertically integrated, it takes orders on demand and provides a one-stop customer shop. Canpac receives virgin tinfoil, then prints the tinfoil, presses and assembles can components, blends powders and packs sachets and cans in many formats.

There are about 100 different changeover combinations in Canpac's Line 4 can assembly plant, excluding reference changeovers. The longest changeover time was on the flanger-beader, slitter or seamer (end changeovers). For a variety of reasons the actual time taken to perform each change differs widely from one change to the next and from person to person. In some cases, a good deal of time was spent on adjusting and resetting.

After changeovers, the line had to be ramped up to speed again - which took more time and contributed to waste. Unstable production plans also made it difficult to plan changeovers and training sessions. (Training setters may take up to two years.) These unpredictable processes led to frustration and inefficiency.

At 24 minutes, reference changeovers were relatively short but frequent - approximately 20 a week. 'Cut-all-plate' changeovers are shorter than other reference changeovers and the first observed time taken for this reference change was eight minutes.

Changeovers accounted for 25% of lost production time, unplanned setting for 30% and unplanned maintenance for 10%.

### Introducing the blitz

Mapping the overall production process highlighted many problem areas and improvement opportunities. A Kaizen blitz was initiated, targeted with improving on-product-time (OPT) performance by 30% on Line 4 can assembly. This was to meet current increased demand, while growth forecasts indicated 20% more demand by March 2008. OPT at the time was 40-50%. The blitz also was aligned with the gradual introduction of a 24/7 production process, which was fully implemented in October 2007.

Set-up time reduction methodology was applied to reference changeovers and during preliminary trials, a conventional reference change was recorded at 12 minutes and a 'cut-all-plate' reference change at two minutes - down from eight minutes. The same methodology also revealed similar improvements on the seamer end changeovers. Although historical data wasn't available, seamer changeovers were believed to have averaged eight hours, while only three hours was noted during a blitz trial.

### Production increase

Kaizen blitz results on Line 4 further indicated that changeover times could be cut by half over time, which means the improvement target of 30% had been exceeded. If this recovered time can be converted to OPT, it will result in an increased can production of about 30%. This improvement level is needed to achieve March 2008 production requirements and is likely to be integral to the Dairy Workers Union's productivity payment.

Plus, the capacity increase will contribute to further growth opportunities. In the months preceding the blitz, capacity constraints resulted in missed sales opportunities. Similarly, if reference change and seamer changeover times are maintained consistently at levels demonstrated during the blitz, production can be upped by 20%.

The next steps are to extend the reference change process to other lines, as well as the flanger-beader and slitter changeover on Line 4. Achieving effective and rapid changeovers requires several people to work together effectively, and the blitz proved that it can be done. The key to sustainability is the continuous improvement process supported by VPM and other TRACC toolkits.

