

Note on the MDC Report and observations on Factsheet 5

The full report is a bit detailed. You would need the computer – (pdf) version to look more closely at the graphs (colour, etc.). I can send on the pdf version by email if you wish. An article of mine on pre-cooling is also included.

My reading of the report and the summary is that:

Directly compared a new IB tank will cool 50 litres per Kwh (i.e. one unit of electricity) and a DX will cool 75 litres per Kwh (pages 33 and 34 of the report)

The IB tank gives very small savings over the DX.

The running cost savings are small over a year.

There are substantial savings between new systems and old ones.

The use of plate coolers saves about one third in running costs

The capital costs of the systems are possibly more important than the running costs when it comes to new installations

There could be more savings with borehole water than mains water

The amount of night rate used has a big effect

10 degrees is the cooling effect accepted as what's possible or commonly (easily) achievable, in the report, from a single stage plate cooler. With the right water:milk flow rate and water temperature more could be achieved (see my article table 1, Moorepark results. The Moorepark results would seem to indicate that a 10 degree temperature reduction (from 35 degrees to 25 degrees would be classed as a poor attempt at pre-cooling milk.)

I'd need to have a more detailed look at it all to be sure my notes above are complete and fully correct.