Quality assurance programs increase consumer confidence in the quality and safety of dairy products. A common approach is to identify critical points during milk production on dairy farms that (1) may impact on milk quality and (2) can be controlled by farmers. Identification and control of key points during product manufacture is known as Hazard Analysis Critical Control Point (HACCP).

Dairy farmers who choose to participate in quality assurance programs must:
- identify relevant control points for milk production on their farms;
- design a flow diagram linking the critical activities that affect milk production;
- specify what they will do at each point;
- describe how their actions and results will be monitored;
- establish what will happen if a result falls outside the acceptable limit; and
- maintain records of key activities in sufficient detail to satisfy auditors.

Examples of activities identified as critical to the production of good quality raw milk are: animal identification systems, livestock sales and purchases, livestock transport, animal health and treatment, drug and chemical registers, mastitis control, water quality, stock feeds purchases, milking practices, milk cooling and storage, milking machine maintenance, staff training, cleaning and sanitation programs, environment and waste management, and record keeping.

For each activity the farmer states:
- the objective;
- what procedures will be implemented to ensure compliance; and
- what ‘quality tests’ will be used to demonstrate compliance.

Rather than have everyone start from scratch, in 1995 the Australian dairy industry developed a food safety and quality management program for farms known as Dairy First (Darmody 1998). Following a pilot trial of 80 dairy farms in Victoria and South Australia in 1997, a variety of these programs using components of Dairy First to varying degrees began to emerge. In May 1998 the Australian Dairy Industry Council, concerned by the plethora of programs, developed a nationally agreed set of required elements that were considered essential for any on-farm quality assurance program to demonstrate that appropriate care had been taken in the production of safe milk.

How can mastitis control be incorporated in a farm quality assurance program?

Quality assurance programs increase consumer confidence in the quality and safety of dairy products. A common approach is to identify critical points during milk production on dairy farms that (1) may impact on milk quality and (2) can be controlled by farmers. Identification and control of key points during product manufacture is known as Hazard Analysis Critical Control Point (HACCP).

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The programs have a good level of voluntary adoption by dairy farmers.

Some dairy companies pay incentives (e.g. an extra 0.5 cents/L) to accredited suppliers. In the future it is possible that farms will be required to have a quality assurance program in place for milk pick-up, payment of quality premiums, or access to vat rebate schemes. It is likely that quality assurance programs will become a benchmark.

**Mastitis control quality assurance**

The following is an example of a mastitis control component of a quality assurance program for dairy farms. It follows ‘best practice’ for mastitis control as recommended by Countdown Downunder.

This example assumes other elements essential to effective mastitis control (such as animal identification, good treatment records, staff training as described above) are covered in the relevant sections of the quality assurance program.

The Countdown Downunder Farm Guidelines for Mastitis Control is a detailed and comprehensive toolkit for farmers interested in milk quality relating to mastitis. For this reason, the action advised when mastitis control activities do not comply with the standard is to “seek professional advice”.

Information in the Farm Guidelines can also be used to identify the standards necessary for mastitis control for other schedules, such as milking machine maintenance, milking hygiene etc.

**Key papers**

## Example of a mastitis control schedule for a farm quality assurance program

<table>
<thead>
<tr>
<th>Critical control activity</th>
<th>When to take action</th>
<th>Minimum standard (Farm Guideline)</th>
<th>Person responsible</th>
<th>Action required (Farm Guideline)</th>
<th>Records</th>
<th>What to do if a problem occurs (non-compliance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detect and treat cows with clinical mastitis</td>
<td>Lactating and dry periods</td>
<td>E</td>
<td>Milkers</td>
<td>Milkers</td>
<td>Stock treatment record and clinical case records</td>
<td>Seek professional advice.</td>
</tr>
<tr>
<td>Minimize spread from cows with mastitis</td>
<td>Throughout lactation</td>
<td></td>
<td>Milkers</td>
<td>Milkers</td>
<td>Test scoring chart</td>
<td>Seek professional advice.</td>
</tr>
<tr>
<td>Maintain bulk milk cell counts below 400,000 cells/mL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hard recording data</td>
<td>Seek professional advice.</td>
</tr>
<tr>
<td>Minimize peak BMCC &gt; 250,000 cells/mL</td>
<td>Each time results are received from the dairy company</td>
<td></td>
<td>Manager</td>
<td>Manager</td>
<td>Average BMCC for the past 6 months &lt; 250/000</td>
<td>Seek professional advice.</td>
</tr>
<tr>
<td>Minimize BMCC from dry to the end of January</td>
<td></td>
<td></td>
<td>Manager</td>
<td>Manager</td>
<td>No purchased cows with BMCC &gt; 250,000 cells/mL</td>
<td>Seek professional advice.</td>
</tr>
</tbody>
</table>

### Farm Quality Assurance Program

Objective:

- All milk supplied to factory to have bulk cell counts less than 400,000 cells/mL.

Follow the Countdown Downunder Farm Guidelines for Mastitis Control. Seek technical advice on milk quality and mastitis.

Farm procedures:

- Lactating and dry periods.
- First month of lactation: < 5 cases/100 cows milking.
- Subsequent months: < 2 cases/100 cows milking.
- Improves test condition within 3 weeks of implementing dry-off.
- Do not milk cows yielding > 5L per day.