

Maintaining water supply

- Good water supply is vital
- Supply to paddocks dependent on:
 - Water source and pumping capacity
 - Pipe sizes and layout
 - Jet size at ballcock
 - Trough capacity

Cow water intake

60 - 110 litres/day - typically 4 litres water per litre milk produced

Main pipe layout

Ring/loop system preferable

Trough size

Allow 5-7 litres/cow



Aim for flow rate of 0.2 litres/cow/min



Impact of pipe size

- Pressure loss in small pipe sizes
- Pressure loss is proportional to pipe length
- Flow area of $\frac{3}{4}$ " pipe is 2 times that of $\frac{1}{2}$ "
- Flow area of 1" pipe is 4 times that of $\frac{1}{2}$ "

Impact of ballcock jet size

	12.5 mm ($\frac{1}{2}$ ") ballcock of 3.6 bar		
Jet type (pressure)	Low	Medium	High
Jet size (inch)	$\frac{3}{8}$ "	$\frac{1}{4}$ "	$\frac{1}{8}$ "
Flow rate (l/min)	42	32	8