

Lincocin Forte

**Broader spectrum,
front-line mastitis
treatment**



Evidence based vet medicines

AgriHealth

A UNIQUE COMBINATION OF **Lincomycin + Neomycin**



DIFFERENTIATED **MODE OF ACTION**

CELL WALL

β-LACTAM ANTIBIOTICS
Inhibit the final stage
of the cell wall synthesis

CELL
MEMBRANE

RNA

CYTOPLASM

RIBOSOME
50S

LINCOMYCIN

LINCOMYCIN
Binds to the 50S ribosomal
subunit: inhibits protein
synthesis

RIBOSOME
30S

NEOMYCIN

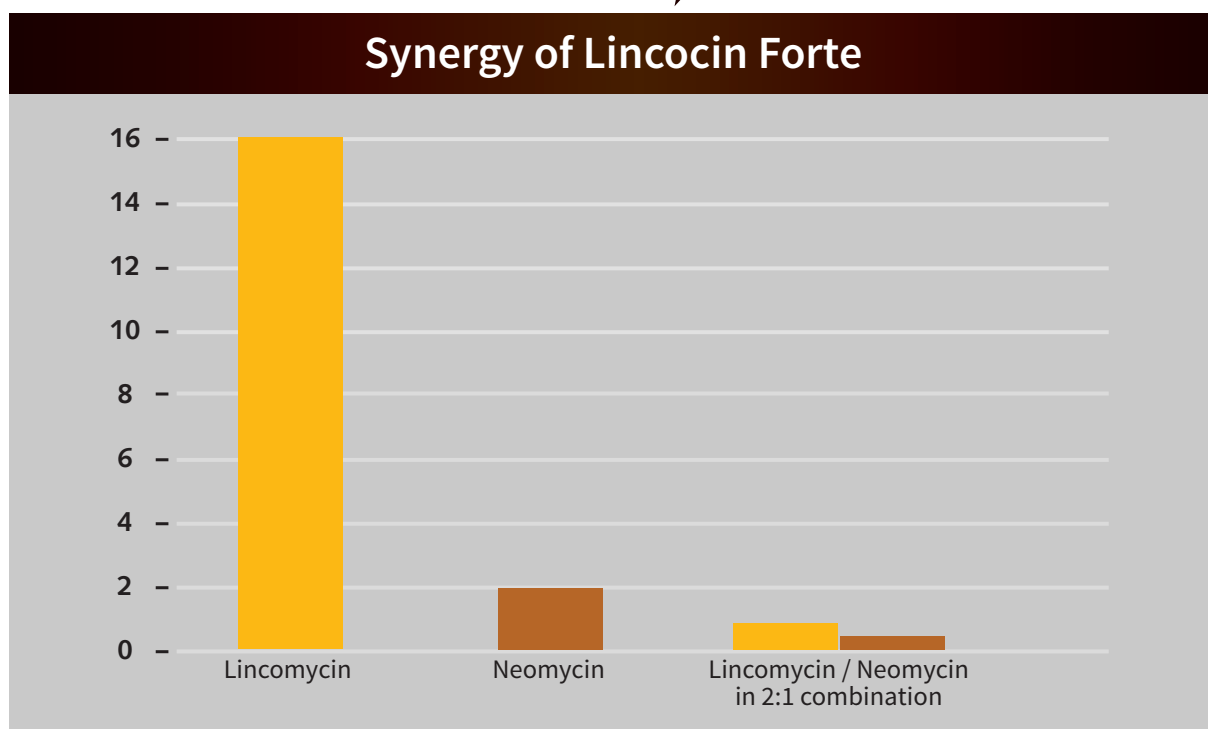
NEOMYCIN
Binds to the 30S ribosomal
subunit: inhibits protein
synthesis

DNA

The combination is active
against β-lactam resistant
bacterial strains

Genuine synergy between two antibiotics working on different mechanisms in the bacterial cell

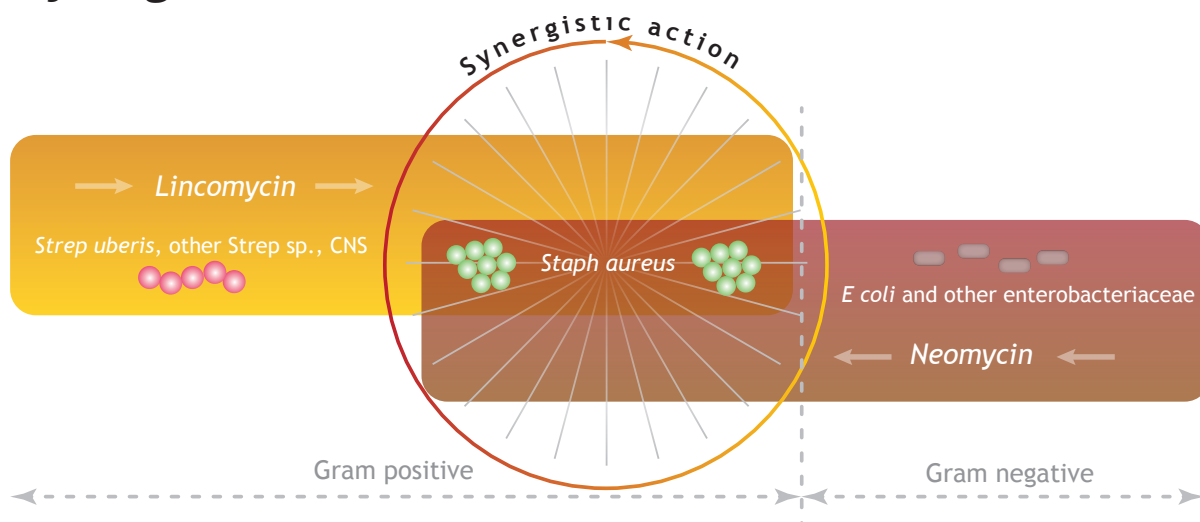
Synergistic Effect - lincomycin combined with neomycin requires only a fraction of the antibiotic to kill *Staph aureus* compared to each antibiotic alone



MIC₉₀ against *Staphylococcus aureus* for lincomycin, neomycin and lincomycin + neomycin combination demonstrating the synergy of the combination

Broader spectrum against all important NZ mastitis bacteria

Synergistic effect of Lincocin Forte



High sensitivity against key bacteria

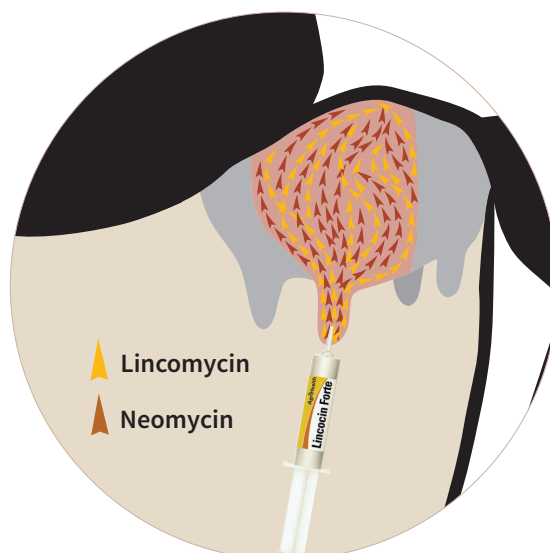
- Proven efficacy against mastitis in NZ
- Unique combination of non- β lactam antibiotics
- Includes antibiotics not used in dry cow therapies in New Zealand
- Synergistic nature of the combination
- Dual action on bacterial ribosome

The synergy of Lincocin Forte is ideally suited to front-line treatment for mastitis in NZ



Fast, effective formulation

- Small, highly lipophilic molecule
- Lincomycin has good penetration into tissue and leucocytes
- Aqueous base allowing rapid dispersion
- Easy to administer
- Well tolerated by tissues
- Lincomycin crosses milk-blood barrier (and recirculates back into udder tissue)



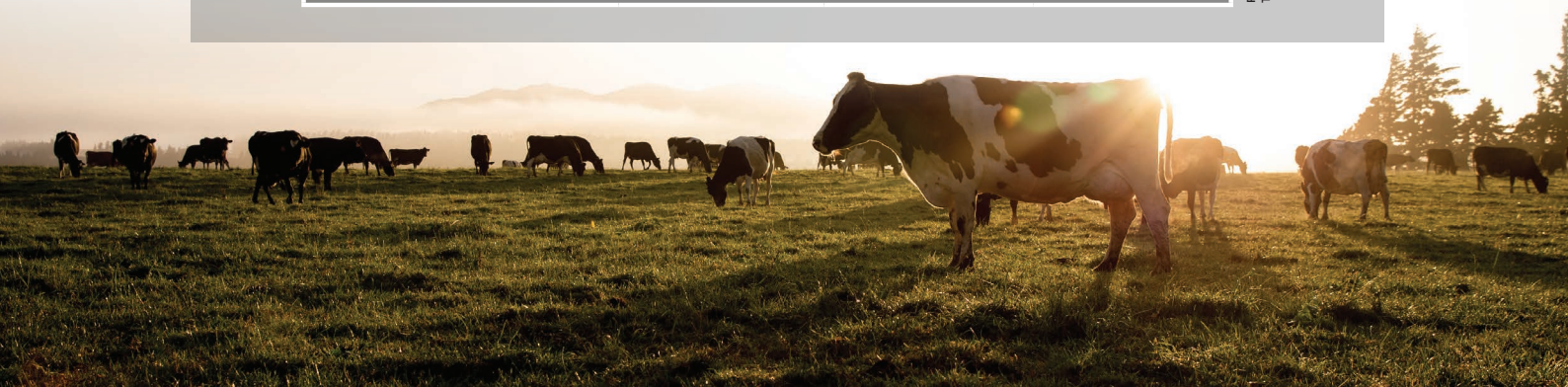
Aqueous base enables ease of administration

Mastitis pathogen target locations

	MILK/DUCTS	UDDER TISSUE	BLOOD
<i>Streptococcus agalactiae</i>	+++	---	---
Other streptococci	+++	+	---
<i>Staphylococcus aureus</i>	+	+++	---
Coagulase-negative staphylococci	+++	---	---
Coliforms	+	---	+++

Treatment needs to target specific locations

Ref: R. J. Erskine, S. Wagner, F. J. DeGraves Mastitis therapy and pharmacology
The Veterinary Clinics Food Animal Practise, 19 (2003) 109-138



Cured cows return to the milking herd faster with less milk discarded

Less milk wasted

- Treat at each milking (12 hourly for twice a day milking or 24 hourly for once a day milking)
- Three treatments
- Milk withdrawal

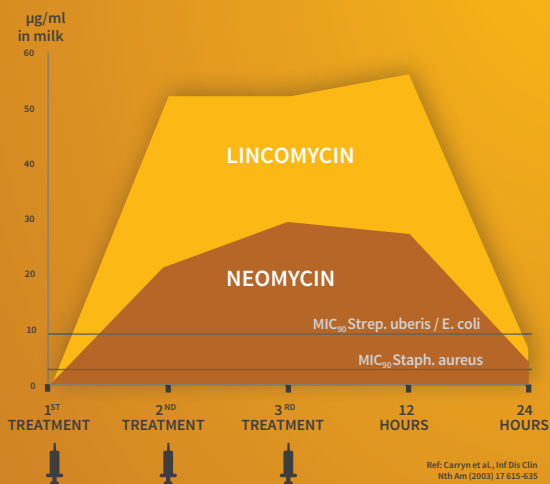
5 milkings if twice a day milking (60 hours)
4 milkings if once a day milking (96 hours)

Total milk discarded

Twice day milking
7 milkings (3.5 days in mastitis herd)

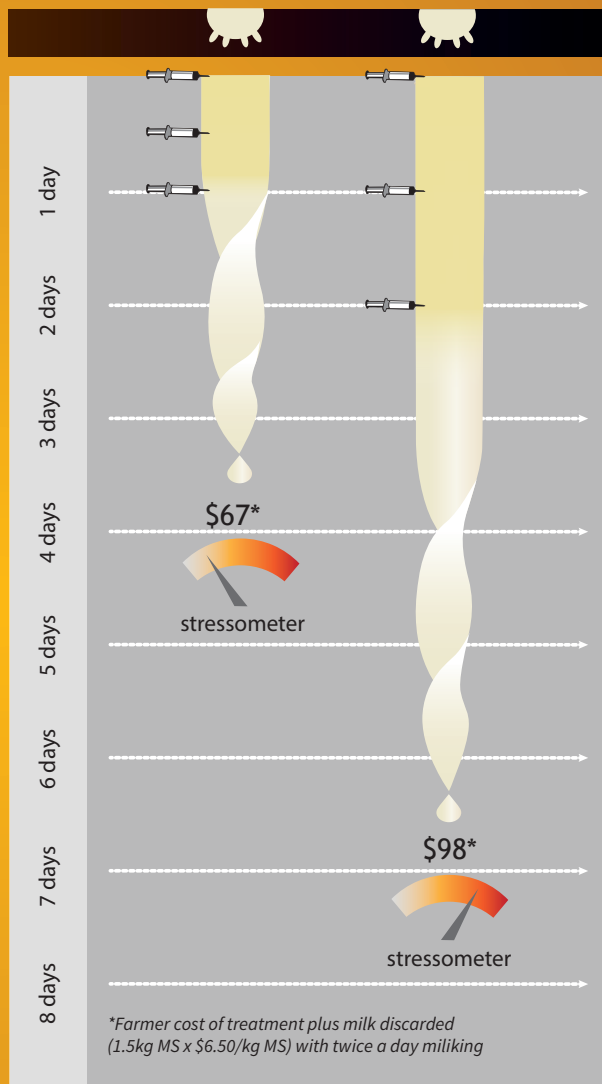
Once a day milking
6 milkings (6 days in mastitis herd)

Less stress of having cows in mastitis herd



Lincocin Forte

Other



Persists above MIC for 24 hours after final treatment



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