Trichomoniasis Infections - Why infection identification Matters:

- Trichomoniasis causes early embryonic loss (EEL) in cows.
- <u>Every</u> infected bull poses a **herd-wide risk** (Wyoming/United States and South Africa have same challenges).
- Branding/conception rates can drop by 10–40%, compounding losses.
- Bull culling + replacement creates a direct cash hit.
- Economic impact is exponential in large herds with higher prevalence.

Economic Losses from Reduced Branding Rates - Goal is 90% branding

Young cattle valued at 389c/kg, 200kg average = AUD \$778/head

| Breeder Herd Size | Branding Rate (%) | Lost Calves | Economic Loss (AUD) |
|-------------------|-------------------|-------------|---------------------|
| 500 | 80 | 50 | \$38,900 |
| | 70 | 100 | \$77,800 |
| | 60 | 150 | \$116,700 |
| | 50 | 200 | \$155,600 |
| 1,000 | 80 | 100 | \$77,800 |
| | 70 | 200 | \$155,600 |
| | 60 | 300 | \$233,400 |
| | 50 | 400 | \$311,200 |
| 5,000 | 80 | 500 | \$389,000 |
| | 70 | 1,000 | \$778,000 |
| | 60 | 1,500 | \$1,167,000 |
| | 50 | 2,000 | \$1,556,000 |
| 10,000 | 80 | 1,000 | \$778,000 |
| | 70 | 2,000 | \$1,556,000 |
| | 60 | 3,000 | \$2,334,000 |
| | 50 | 4,000 | \$3,112,000 |

Trichomoniasis Replacement Cost Summary – Impact by Herd Size

| Breeder Herd Size | Bull Herd Size (2%) | Trich Prevalence (%) | Infected Bulls | Replacement Cost (per bull) | Total Replacement Cost (AUD) |
|----------------------|------------------------|----------------------------|-------------------|--------------------------------|---------------------------------|
| 500 | 10 | 2% | 1 | \$5,000 – \$20,000 | \$5,000 - \$20,000 |
| | | 5% | 1 | \$5,000 – \$20,000 | \$5,000 - \$20,000 |
| | | 10% | 1 | \$5,000 - \$20,000 | \$5,000 - \$20,000 |
| | | 15% | 2 | \$5,000 - \$20,000 | \$10,000 – \$40,000 |
| 1,000 | 20 | 2% | 1 | \$5,000 - \$20,000 | \$5,000 - \$20,000 |
| | | 5% | 1 | \$5,000 - \$20,000 | \$5,000 - \$20,000 |
| | | 10% | 2 | \$5,000 – \$20,000 | \$10,000 - \$40,000 |
| | | 15% | 3 | \$5,000 – \$20,000 | \$15,000 – \$60,000 |
| 5,000 | 100 | 2% | 2 | \$5,000 – \$20,000 | \$10,000 - \$40,000 |
| | | 5% | 5 | \$5,000 – \$20,000 | \$25,000 - \$100,000 |
| | | 10% | 10 | \$5,000 – \$20,000 | \$50,000 – \$200,000 |
| | | 15% | 15 | \$5,000 - \$20,000 | \$75,000 – \$300,000 |
| 10,000 | 200 | 2% | 4 | \$5,000 - \$20,000 | \$20,000 - \$80,000 |
| | | 5% | 10 | \$5,000 - \$20,000 | \$50,000 – \$200,000 |
| | | 10% | 20 | \$5,000 – \$20,000 | \$100,000 — \$400,000 |
| | | 15% | 30 | \$5,000 - \$20,000 | \$150,000 — \$600,000 |