CRC for Premium Quality Wool

Strategies for Controlling Blowfly Strike in Sheep

Produced for the CRC for Premium Quality Wool undergraduate program by;
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Conventional control measures

- **Host**
  - mules replacement stock (reduces breech strike by 90%)
  - dock tail to correct length (below 3rd joint)
  - pizzle drop wethers
  - control parasitic and nutritional scours
  - shear before main fly period
  - crutch ewes and ring wethers just prior to fly wave

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Mulesing

Tail docking

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- **Pathogen**
  - Chemical treatment of host
    - Organophosphates - resistance widespread
    - Insect growth regulators e.g. Vetrazin® - no resistance
    - Synthetic pyrethroids - oviposition suppresants
    - Ivomec (Jetamec®) - worked but was withdrawn from market
    - Insect development inhibitors - newest class
  - Fly traps - may be useful in arid areas
- **Environment**
  - Fly wave prediction from climatic measurements
  - Control carrion?

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Other potential control measures

- **Host**
  - Wider use of genetic selection for resistance (direct and indirect)
  - Vaccination
    - Against fly antigens - still a way to go
    - Against fleece rot - problems with diversity of strains of *P. aeruginosa*

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- **Pathogen**
  - use of Ivermectin slow release capsules
  - use of *Bacillus thuringiensis* toxins
  - biological control of adults using the microsporidium *Octosporea muscaedomesticae*
  - sterile male release
  - males carrying defective genes
  - genetic engineering of sheep or normal skin bacteria

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