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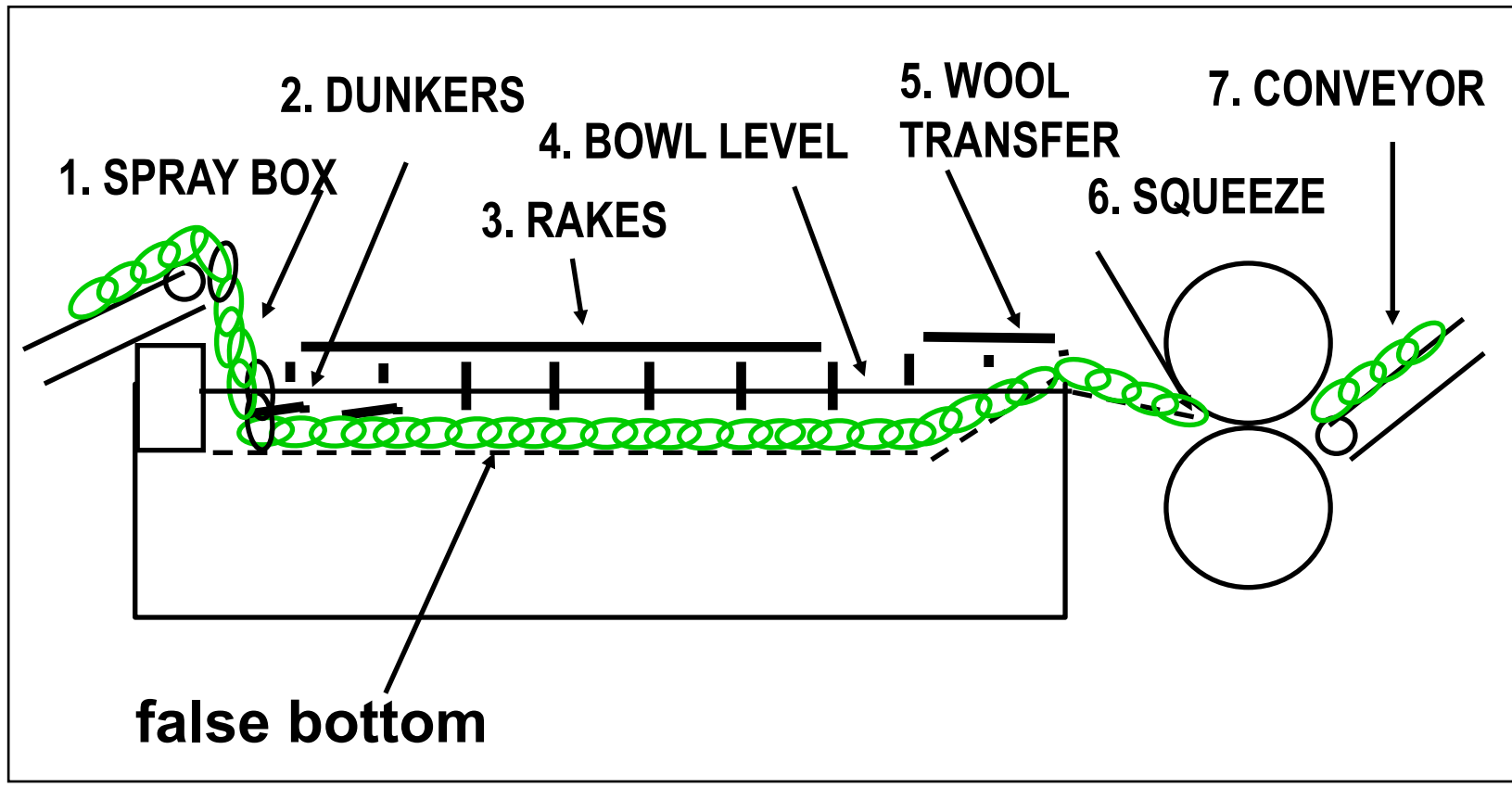
Quality

Wool

# Fibre Entanglement in Scouring

Produced for the CRC for Premium Quality Wool undergraduate program by;  
Dr. Jock Christoe, CSIRO Textile and Fibre Technology.

# Working Points in an Aqueous Scour



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# Bowl Feed

- **Spray Box**
  - wool pushed into bowl
  - turbulence
- **Dunkers**
  - wetting out
  - push down and forward
  - turbulence

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# Wool Transport

## METHODS

- rakes
  - swing rakes
  - harrows
  - triple-crank rakes
- suction drums
  - floating mat

## ENTANGLING ACTIONS (rakes)

- general turbulence
- needle felting
- jagged motion



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# Squeeze Rollers

- **Transfer to Nip**
  - wool pushed
  - water level high
- **At the Squeeze Nip**
  - stuffer box effect
  - turbulence
    - major contributor
- **Methods**
  - Belgian lifts
  - swing rakes
  - head rakes
  - main rake extensions



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# Entanglement Reduction

- **Modify existing machines**
- **Radical changes to the scouring machines**
- **Change the scouring medium**
  - aqueous
    - de Smet
    - Wooltech
  - solvent
- **Change the scouring configuration**
  - Siroscour

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# Fibre Effects in Scouring

- **Diameter (decrease)**
  - higher detergent concentration required
    - more surface area
  - more entanglement possible
    - more fibre / fibre contacts
- **Crimp Frequency (increase)**
  - associated with diameter decrease
  - more entanglement
    - more fibre / fibre contacts
- **Crimp Definition (increase)**
  - less entanglement

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