A. Ked (Sheep Tick) (Melophagus ovinus):

1. Life cycle and damage
   a. Entire life on sheep
   b. Intermittent blood sucking
   c. Damage to hide; downgrading of lamb pelts
   d. While trying to scratch, some ewes get on back and die
2. Insecticides (Treat only the sheep, not the environment)
   a. Pyrethroid insecticides are highly effective and very safe
      Fenvalerate (Ectrin): Pour-on, Spray, Dip
      Permethrin (Expar; De Lice): Pour-on
   b. Other products to consider
      Coumaphos (Co-Ral): Spray, Dip
      Diazinon: Spray, Dip
      Malathion: Spray, Dust, Dip
      Methoxychlor: Spray, Dust, Dip
      Dioxathion and Dichlorvos: Spray
      Crotoxyphos and Dichlorvos: Spray
3. Timing of Treatment
   a. Immediately after shearing is best
   b. Pour-on and dust products can be used during winter

B. Lice:

1. Feeding Type
   a. Chewing (Biting)—Feeds on skin surface; causes severe itching, irritation and wool pulling. Very hard to see.
   b. Sucking—Attach to skin and suck blood. Foot louse only on lower feet and legs. Body louse, especially around udder or scrotum and at withers.
2. Host specific and won't survive on chickens, cattle, etc. Complete entire life cycle on the sheep. Will live for a few days off the host, but spread mainly by direct contact. Reach highest populations at coldest season.
3. Insecticides to Consider

<table>
<thead>
<tr>
<th>Malathion</th>
<th>Brand Name</th>
<th>Method of Application</th>
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</thead>
<tbody>
<tr>
<td>Methoxychlor</td>
<td>Ectrin</td>
<td>Pour-on, Spray</td>
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<tr>
<td></td>
<td>Expar; De-Lice</td>
<td>Pour-on</td>
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<tr>
<td></td>
<td>Co-Ral</td>
<td>Spray, Dip</td>
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<td></td>
<td>Ciodrin</td>
<td>Spray, Dust, Dip</td>
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<td></td>
<td>Kemtox</td>
<td>Spray, Dip</td>
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<td>Ciovap, Simax</td>
<td>Spray</td>
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</tbody>
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4. Application

Less effective for sucking body louse
Ineffective for foot louse

Problem with disposal of residual product
Best method for lice control

so they re-populate the next year. Best used after shearing and repeated at 3 weeks later, but this is usually not practical because of lambing.

1. Life Cycle
   Adult - Fly

2. Occurrence
   Common, but seldom cause enough damage in range flocks to warrant treatment

3. Treatment
   The ivermectin dewormer (Merck) is approved for treatment and is highly effective.

1. Flies lay eggs by soiled wool or injured tissue; larvae invade skin and tissue.
2. Treatment - Clip wool and apply insecticide.