**State Stockman’s Senior Team Problem**

**Team Number__________________                         Team Name___________________**

Scenario: You are a Katahdin producer in Southwest Virginia. You have 100 Katahdin ewes. You are considering using a terminal cross (TC) on 50 ewes instead of using purebreds (PB) for market lamb production. Lambs will be grazed for 90 days on a fescue based pasture and supplemented with a concentrate pellet. Compare the performance of terminal cross lambs vs. purebred lambs to increase profitability of your sheep enterprise. (Consider only 50 ewes used)

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>TC Lambs</th>
<th>PB Lambs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaning Percentage:</td>
<td>170%</td>
<td>180%</td>
</tr>
<tr>
<td>Weaning weight:</td>
<td>55 lbs</td>
<td>50 lbs</td>
</tr>
<tr>
<td>Supplement rate:</td>
<td>3% body weight</td>
<td>3% body weight</td>
</tr>
<tr>
<td>ADG:</td>
<td>0.20 lb/day</td>
<td>0.13 lb/day</td>
</tr>
<tr>
<td>Death Loss:</td>
<td>6%</td>
<td>4%</td>
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<tr>
<td>Deworming %:</td>
<td>70%</td>
<td>40%</td>
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</tbody>
</table>

1. How many lambs will be weaned from each breed group?

2. How many lambs will be available to market?
   - Round down to the nearest whole number

3. What will the lambs weigh at the end of the grazing season?
   - Round weight to the nearest 0.1 lb.

4. What will be the value of market ready lambs per head (see back)?
   - Assume lambs are marketed after the 90 day grazing period

5. What will be the total value of marketed lambs?

6. How many lambs will be dewormed?
   - Assume % of original population before death loss
   - Round down to the nearest whole number
7. What anthelmintic dosage (per head) would these lambs receive?
   - Assume average summer grazing weight
   - Round anthelmintic dose to the nearest 0.1 ml

8. What is the cost of anthelmintic per head?

9. What is the total cost of deworming?

10. What are the feed costs per head?
    - Assume average summer grazing weight

11. What are the total feed costs per breed group? (original population size)

12. What is the net profit/loss per breed group?

13. Should you utilize this crossbreeding system? Yes No
Slaughter Lambs Wooled and Shorn Choice 1 and 2

<table>
<thead>
<tr>
<th>Weight Range (lbs)</th>
<th>Average Price (cwt)</th>
</tr>
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<tbody>
<tr>
<td>40-50</td>
<td>315.25</td>
</tr>
<tr>
<td>50-60</td>
<td>306.15</td>
</tr>
<tr>
<td>60-70</td>
<td>290.34</td>
</tr>
<tr>
<td>70-80</td>
<td>284.51</td>
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<tr>
<td>80-90</td>
<td>272.09</td>
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</tbody>
</table>

Supplemental Price Information

Feed
1 ton                              $300

Anthelmintic
4000 mL bottle            $234.95

PRODUCT DESCRIPTION: CYDECTIN Oral Drench for Sheep is a ready-to-use solution containing 0.1% moxidectin. Moxidectin is an endectocide in the milbemycin chemical class which shares the distinctive mode of action characteristic of macrocyclic lactones. Moxidectin acts by interfering with chloride channel-mediated neurotransmission in the parasite. This results in paralysis and elimination of the parasite.

INDICATIONS: CYDECTIN Oral Drench for Sheep, when administered at the recommended dose level of 0.2 mg moxidectin/2.2 lb (0.2 mg/kg) body weight, is effective in the treatment and control of adult and larval (L4) stages of the following internal parasites of sheep:

Parasites
- Haemonchus contortus - Adult and L4
- Teladorsagia circumcincta - Adult and L4
- Teladorsagia trifurcata - Adult and L4
- Trichostrongylus axei - Adult and L4
- Trichostrongylus colubriformis - Adult and L4
- Trichostrongylus vitrinus - Adult and L4
- Cooperia cuculci - Adult and L4
- Cooperia oncophora - Adult and L4
- Oesophagostomum columbianum - Adult and L4
- Oesophagostomum venulosum - Adult and L4
- Nematodirus battus - Adult and L4
- Nematodirus filicollis - Adult and L4
- Nematodirus spathiger - Adult and L4

ADMINISTRATION: CYDECTIN Oral Drench is ready-to-use. Administer 1 mL per 11 lb (1 mL per 5 kg) body weight into the mouth of the sheep, using any standard drenching equipment. Check dose rates and equipment before drenching. Do not overdose. Do not mix with any other products before administration. Avoid contaminating the drench solution.

NADA 141-247, Approved by FDA