**Feature/Function:**
Zelnate consistently improved survivability resulting in a 22% reduction in overall death loss, regardless of on arrival or delayed MLV.

**Benefit:**
No matter what type of operation you have (backgrounder, finisher, feedlot, etc), fewer deads means fewer cattle that suffer, improving animal welfare.

**Feature/Function:**
Zelnate significantly reduced overall mortality and BRD mortality at several measured time frames, regardless of whether the MLV vaccine was administered on arrival or delayed 30 days.

**Benefit:**
Zelnate can be implemented into your current on arrival protocols to help reduce the number of deads in your herd and improve sustainability on your operation through fewer wasted resources.

**Feature/Function:**
Delaying the MLV significantly reduced 2nd BRD treatments at all three time frames, and significantly reduced BRD re-treatment risk at 116 days and close-out.

**Benefit:**
Delaying the MLV improves animal welfare by helping reduce stress on the animal during vaccination. And fewer BRD re-treatments result in a decreased use of antibiotics.

For more information about Zelnate and this study visit www.Zelnate.com

This product is based on technology developed by Juvaris BioTherapeutics and is patent protected. Animal health applications are being exclusively developed by Bayer Animal Health and are the subject of Bayer patent applications.

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Bayer (reg’d), the Bayer Cross (reg’d), Zelnate® and It’s not an antibiotic. It’s not a vaccine. It’s Zelnate.™ are trademarks of Bayer.
Objectives: Examine how Zelnate, when used on arrival, may improve health and performance outcomes. Observe the potential benefits of delaying the MLV vaccine until after the initial stress and Mannheimia haemolytica challenges are experienced.

- Zelnate consistently improved survivability resulting in a 22% reduction in overall death loss, regardless of on arrival or delayed MLV
- Zelnate significantly reduced overall mortality at every measured time frame (60 days, 116 days and close-out), regardless of whether the MLV vaccine was administered on arrival or delayed 30 days
- Zelnate significantly reduced BRD mortality at 60 days and 116 days compared to calves not treated with Zelnate, and followed the same trend at close-out ($P=0.06$)
- Zelnate showed a trend in reducing the BRD case fatality rate throughout the study, although the reduction was not statistically significant
- Delaying the MLV significantly reduced 2nd BRD treatments at all three time frames, and significantly reduced BRD re-treatment risk at 116 days and close-out

**Mortality rates: Without Zelnate vs. with Zelnate**

**60 Days on feed (DOF)**

<table>
<thead>
<tr>
<th></th>
<th>Total Mortality</th>
<th>BRD Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Zelnate</td>
<td>3.51%</td>
<td>2.45%</td>
</tr>
<tr>
<td>With Zelnate</td>
<td>2.43%</td>
<td>2.24%</td>
</tr>
</tbody>
</table>

**116 Days on feed (DOF)**

<table>
<thead>
<tr>
<th></th>
<th>Total Mortality</th>
<th>BRD Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Zelnate</td>
<td>4.63%</td>
<td>3.17%</td>
</tr>
<tr>
<td>With Zelnate</td>
<td>3.36%</td>
<td>2.80%</td>
</tr>
</tbody>
</table>

**Close-out**

<table>
<thead>
<tr>
<th></th>
<th>Total Mortality</th>
<th>BRD Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Zelnate</td>
<td>5.61%</td>
<td>4.36%</td>
</tr>
<tr>
<td>With Zelnate</td>
<td>3.96%</td>
<td>2.99%</td>
</tr>
</tbody>
</table>

A Clinical Field Study of Zelnate® DNA Immunostimulant on Arrival with MLV Vaccine on Arrival or Delayed.

**Check-Off (Quality)**
Identify if a Bayer representative has been in recently:

**Invitation (neutral)**
Let’s take a look at the study results here where Zelnate resulted in a 22% reduction in overall death loss in a trial of more than 5,000 feedlot heifers.

**It’s the customer’s decision**
... so you can decide if adding Zelnate on arrival and delaying the MLV vaccine ~ 30 days is an option you’ll consider with your clients’ cattle herds.