A space-time analysis of Mycoplasma bovis in Denmark

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A space-time analysis of *Mycoplasma bovis* in Denmark

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### Background

*Mycoplasma (M.) bovis* causes in cattle, among other diseases, mastitis. The dairy cattle population in Denmark had an increase in atypical clinical outbreaks of *M. bovis* over the past years. An important prerequisite to the implementation of an effective control program is to determine the geographical distribution of *M. bovis*.

### Conclusions

- *Mycoplasma bovis* infected herds are clustered in northern or southern Denmark.

### Results

Space-time scan statistics (SatScan™) / K-function

**Significant local primary clusters**

<table>
<thead>
<tr>
<th>Round</th>
<th>1st Round</th>
<th>3rd Round</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td><img src="image1.png" alt="Map" /></td>
<td><img src="image2.png" alt="Map" /></td>
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</tbody>
</table>

The maps show the location of the clusters of *M. bovis* infected herds, while the inserts (K-function) indicate global clustering of cases around a radius of 70 km (app), in each round. (*)There was no clustering in the second round.

**A marginally significant primary cluster:**

The clusters are in areas with high herd and cattle density.

### Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>First round</th>
<th>Second round</th>
<th>Third round</th>
<th>Fourth round</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>Jan</td>
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<tr>
<td>2014</td>
<td>Aug</td>
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</table>

- **ELISA test**
  - Negative: ODC% ≤ 50
  - Positive: ODC% > 50

*All Dairy herds were sampled.*

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