<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Developing a brucellosis reporting form and an accompanying investigation format</th>
</tr>
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<tbody>
<tr>
<td><strong>Authors(s)</strong></td>
<td>O'Keeffe, James</td>
</tr>
<tr>
<td><strong>Publication date</strong></td>
<td>1999-09</td>
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<tr>
<td><strong>Series</strong></td>
<td>Selected Papers, 1998</td>
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<td><strong>Publisher</strong></td>
<td>University College Dublin. Centre for Veterinary Epidemiology and Risk Analysis</td>
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<td><strong>Item record/more information</strong></td>
<td><a href="http://hdl.handle.net/10197/8833">http://hdl.handle.net/10197/8833</a></td>
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</tbody>
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Developing a Brucellosis Reporting Form and an Accompanying Investigation Format

J. J. O’Keeffe

Introduction
A review of the systems within the Department of Agriculture and Food in relation to brucellosis in cattle was undertaken in October 1997 by a study group which was representative of the veterinary and administrative personnel most intimately involved in brucellosis. The Tuberculosis Investigation Unit acted as facilitator to the group which met on five occasions and addressed two broad set of needs:

A. Needs of Local/Regional/ HQ Managers (Operations).
B. Needs of Epidemiology/ DAF Managers (Policy).

A primary objective of the study during the five meetings was to agree draft reporting formats for use by field veterinarians investigating brucellosis breakdowns. The group also defined a structured approach to the investigation, which would standardise procedures. These proposed reporting formats were tested by field staff in Cork, Kerry, Limerick and Tipperary during 1998. The current draft (Draft No. 6) has been modified in line with suggestions received during trialling to date and is being applied in Counties Clare, Cork, Kerry, Limerick, Tipperary and Offaly from 1st July 1999 onwards.

The present draft is a modular format containing 7 individual reports, in bound form. Individual breakdowns may qualify for differing combinations of reports. It is intended that the structure of each investigation will return data which (1) will assist in establishing the source of the breakdown and, (2) will identify risk factors that might have contributed to the outbreak.

Breakdowns investigations to which the format will apply.
The procedure described here will be applied in the following circumstances:

• All breakdowns require a report on the tracing of purchased reactors.
• All breakdowns require a report to be completed at de-restriction.

The following additional reports are only required where two or more serologically positive animals are identified during a breakdown:

• A validated contiguous list at de-restriction.
• A herd visit and report.
• Forward tracing of potentially infected cattle moved out of the herd.

Breakdowns identified following a positive whey ELISA test or during the follow-up testing of reported abortions require additional details to be recorded.

Feedback from staff at the participating DVO’s will be sought at regular intervals of 4–6 weeks. The progress of investigations will then be reviewed with each participating VI on attendance. A final review of the reporting format and procedures will be undertaken at the end of 1999 with a view to adopting this procedure on a national basis from thereon.
Brucellosis Restricted Herd. Draft 6

Herd Number

Name

Address

Phone Number

Private Practitioner ___________ PVP Code ___________

Creamery (if supplier of milk) ___________ VI ___________

Date Restricted __/__/__

Identification method (circle as appropriate):

Whey ELISA Pos. Positive Abortion Blood Test Tracing

Date Derestricted __/__/__ Depopulated Yes / No

Depop date __/__/__

ERAD/TEAGASC 77 Tuberculosis Investigation Unit, UCD
SVI Check List  
**Draft 6**

All Brucellosis breakdowns should have a report on backtracing and a report at the derestriction stage

<table>
<thead>
<tr>
<th>Required Yes/No</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-tracing of Reactors (Page 4)</td>
<td></td>
</tr>
<tr>
<td>Report at de-restriction stage (Page 8 - 9)</td>
<td></td>
</tr>
</tbody>
</table>

The following reports are **only required** in confirmed outbreaks:

<table>
<thead>
<tr>
<th>Required Yes/No</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward tracing (Page 5)</td>
<td></td>
</tr>
<tr>
<td>Index Herd Visit (Page 6 - 7)</td>
<td></td>
</tr>
<tr>
<td>Validated Contiguous Herd List (Page 10)</td>
<td></td>
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</tbody>
</table>

Where a breakdown is identified following a Whey ELISA Positive or by a Positive Abortion fill the following:

<table>
<thead>
<tr>
<th>Required Yes/No</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-up on Whey ELISA (Page 3)</td>
<td></td>
</tr>
<tr>
<td>Follow-up on abortions (Page 3)</td>
<td></td>
</tr>
<tr>
<td>Epidemiology data to TIU</td>
<td></td>
</tr>
</tbody>
</table>
Commence report at this point if the breakdown was identified following a positive Whey ELISA or alternatively in blood testing following on a reported abortion. Otherwise skip this page and commence report on page 4

**Follow-up on Positive Whey ELISA Results** *Draft 6*

Positive Whey ELISA test date __/__/

Testing Laboratory ________________

**Follow-up on reported abortions.**

Date abortion reported __/__/__  Blood test/Phone/Reg.Lab (B/P/L) __

Was material sent for culture Y/N __ Result ________________

Tag No.(s) of animal(s) that aborted: __________________________

<table>
<thead>
<tr>
<th>Date of 1st Blood test <strong>/</strong>/__</th>
<th>Tag No.(s)</th>
<th>Result</th>
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<tr>
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<tr>
<td>Date of 21day retest <strong>/</strong>/__</td>
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ERAD/TEAGASC  79  Tuberculosis Investigation Unit, UCD
Backtracing. Draft 6

1 Total females ___ ___ ___
2 Total cards for females ___ ___ ___
3 No. of females introduced over last 2 breeding cycles ___ ___ ___
4 Number of introduced animals at 3 **that are now reactors** ___ ___ ___
5 On how many animals at 4 was tracing commenced ___ ___ ___
6 On how many was tracing completed ___ ___ ___
7 Was there any evidence of introduced animals having had previous exposure to brucellosis infection? Y/N ___ ___ ___
8 Herd Nos. in which introduced reactor animals were traced to:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Comments on investigation into purchasing:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
**Forward tracing. Draft 6**

1. Date prior to the outbreak from when animals were traced __/__/__

2. Forward tracing initiated on __________ animals in own DVO.

3. Tracing completed on __________ animals in own DVO area.

4. Other DVOs notified of __________ animals at risk.

Comments:

5. Of the __________ animals traced in own DVO area:
   - __________ were test positive in destination herds.
   - __________ were test negative, deemed reactor and slaughtered following tracing.
   - __________ were test negative in the destination herd and not slaughtered.
   - __________ were slaughtered as part of normal culling.
   - __________ were retagged and could not be traced.
   - __________ could not be traced. Give reason(s) ____________________________

6. In own DVO area, Tag Nos. of at risk animals not slaughtered:

7. Enter Tag Nos and DVO code of animals traced outside own DVO area:

<table>
<thead>
<tr>
<th>Tag No</th>
<th>DVO</th>
<th>Tag No.</th>
<th>DVO</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**ERAD/TEAGASC**

81 Tuberculosis Investigation Unit, UCD
**Report of Farm Visit to Index Herd. Draft 6**

Date of farm visit: __/__/___

Is herdowner farming Fulltime/ Parttime Haulier Yes/No Registered Dealer Yes/No

**Herd Profile:**

- Total Cattle at Time of Breakdown: __/__/__/__
- Dairy Cows: _____ Suckler cows: _____ Fattener cows: _____ Bulls: _____
- Pregnant Heifers: _____ Other Heifers: >1yr: _____ Other Heifers: <1yr: _____

Are breeding animals housed at calving Y/N: __
In isolation facilities Y/N: __
Start/Finish of calving season: _____ to: _______ No of reactors calved/aborted: __

No of Dry Cows: __
Are replacements purchased Y/N: __

Do Cows and Replacement Heifers graze land parcels in common Y/N: __

Comments on purchases: ______________________________________________________________

Milk produced previous year: _____ (G/L) Milk Quota leased: _____ (G/L)

No. of Relevant Land Parcels: _____ Relevant area farmed: _____ (Acres/Hectares)

Is AI used Y/No If yes, is DIY used Y/No Are bulls used with Cows Y/No Heifers Y/No

Vet. Practitioner(s) that attended calvings or abortions during the last calving season:

- Name(s) and Reg. No(s): ____________________________________________________________

Are farm relief personnel used Y/N If yes, list names/duties: ____________________________

Was there shared labour identified (family or otherwise) Y/N

If yes give details: ___________________________________________________________________

Is waste from calving area disposed of safely Y/N: __

Comments: ________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

ERAD/TEAGASC 82 Tuberculosis Investigation Unit, UCD
Was there any sources of mechanical spread identified Y/N __
Shared machinery (direct contact with cattle) Y/N Slurry/manure spread by contractors Y/N Haulier Y/N Foxes Y/N Dogs (free to roam) Y/N High splash plate slurry spreader Y/N Other Y/N Details ___________________________________________________________________

Total R's disclosed at Index test __ __ __ __ __ Test Date __ __ MRT/WE Pos Y/N __

**Herd Profile at the Index test**

**Total Herd**

Nat.Grid Co-ord. X __ __ __ __ Y __ __ __ __ Relevant Area ___ Acres/Hectares

<table>
<thead>
<tr>
<th></th>
<th>No. Animals</th>
<th>No. aborted</th>
<th>No. Rs</th>
<th>Highest CF, SAT, EIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Preg. Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Other Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
</tbody>
</table>

**Division 1**  (Divisions apply where two herds are covered by one herdnumber)

Nat.Grid Co-ord. X __ __ __ __ Y __ __ __ __ Relevant Area ___ Acres/Hectares

<table>
<thead>
<tr>
<th></th>
<th>No. Animals</th>
<th>No. aborted</th>
<th>No. Rs</th>
<th>Highest CF, SAT, EIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Preg. Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Other Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
</tbody>
</table>

**Division 2**  (Divisions apply where two herds are covered by one herdnumber)

Nat.Grid Co-ord. X __ __ __ __ Y __ __ __ __ Relevant Area ___ Acres/Hectares

<table>
<thead>
<tr>
<th></th>
<th>No. Animals</th>
<th>No. aborted</th>
<th>No. Rs</th>
<th>Highest CF, SAT, EIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Preg. Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
</tr>
<tr>
<td>Other Heifers</td>
<td>___________</td>
<td>___________</td>
<td>_______</td>
<td>___</td>
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</tbody>
</table>

Comments: ____________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________
Report at De-restriction Draft 6

Date restricted __/__/__  De-restriction date __/__/__

Depop (Part/Full/No) ___ on ___/__/__

Total Reactors (exclude incontacts)___ Epi Status (2,3 or 4) ___

Titres of the 4 animals with the highest Compliment Fixation test titres

<table>
<thead>
<tr>
<th>Tag No.</th>
<th>CF</th>
<th>MSAT</th>
<th>EIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tag No.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tag No.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tag No.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tag No.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Details of the animal class of all the reactors identified during breakdown:

<table>
<thead>
<tr>
<th>Animal Class</th>
<th>No. Animals</th>
<th>No. Aborted</th>
<th>No. Rs</th>
<th>Culture Y/N/Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preg. Heifers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Heifers</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

In your opinion had this herd Brucellosis Y/N ___

If no give your reasons: ________________________________

______________________________

Number of contiguous herds with females ___

Number of contiguous herds restricted during previous 2 years ___

Number of the above herds with brucellosis confirmed ___

Herd No(s) of these herd(s):

______________________________

______________________________

______________________________

______________________________
VI Evaluation on possible sources of infection:

The investigating veterinarian should evaluate the risk of infection having originated from either

[Weights 1 to 5 to be defined]:

1. Purchased infected stock. 
2. Residual animal from previous breakdown in the herd
4. Non-contiguous adjacent herds (area problems).
5. Associated herds
6. Mechanical sources.

VI opinion as to the source of this breakdown [__] [1-6 or Unknown]

Comments:

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

________________________________________

Report finalised on__/__/___ VI__||__|__|___|___|__|___|___|__|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|___|_
The Risk Evaluation element is optional.

List of validated contiguous herds:

<table>
<thead>
<tr>
<th>County</th>
<th>Herd No.</th>
<th>Cd</th>
<th>Status*</th>
<th>Risk Evaluation (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

(To be completed at derestriction of index herd.)

List of associated herds:

<table>
<thead>
<tr>
<th>County</th>
<th>Herd No.</th>
<th>Cd</th>
<th>Status*</th>
<th>Risk Evaluation (1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

(To be completed at derestriction of index herd.)

*Options: Status = Depopulated, Restricted or Clear