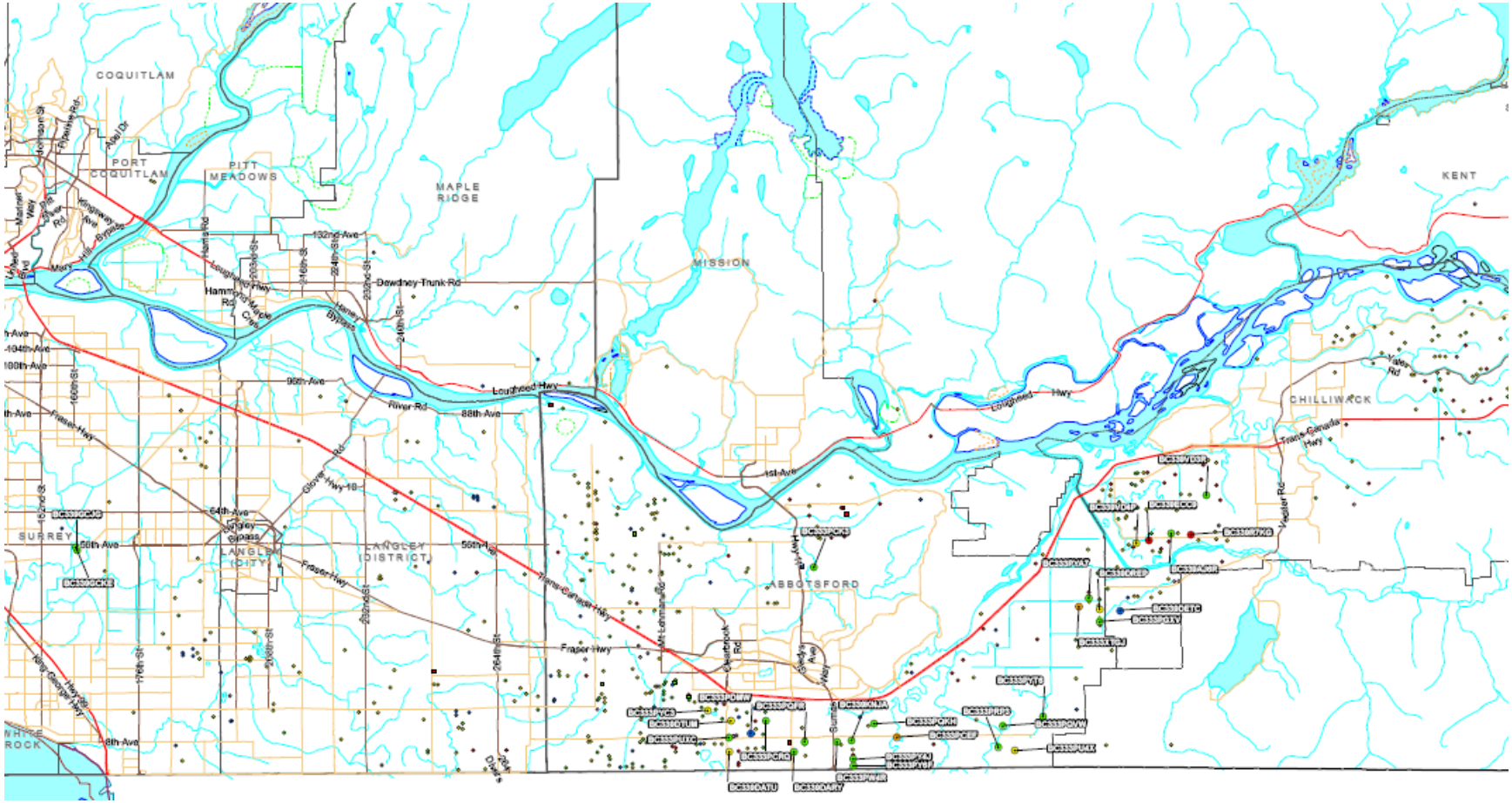
Ministry of **Agriculture**

ILT in the Fraser Valley

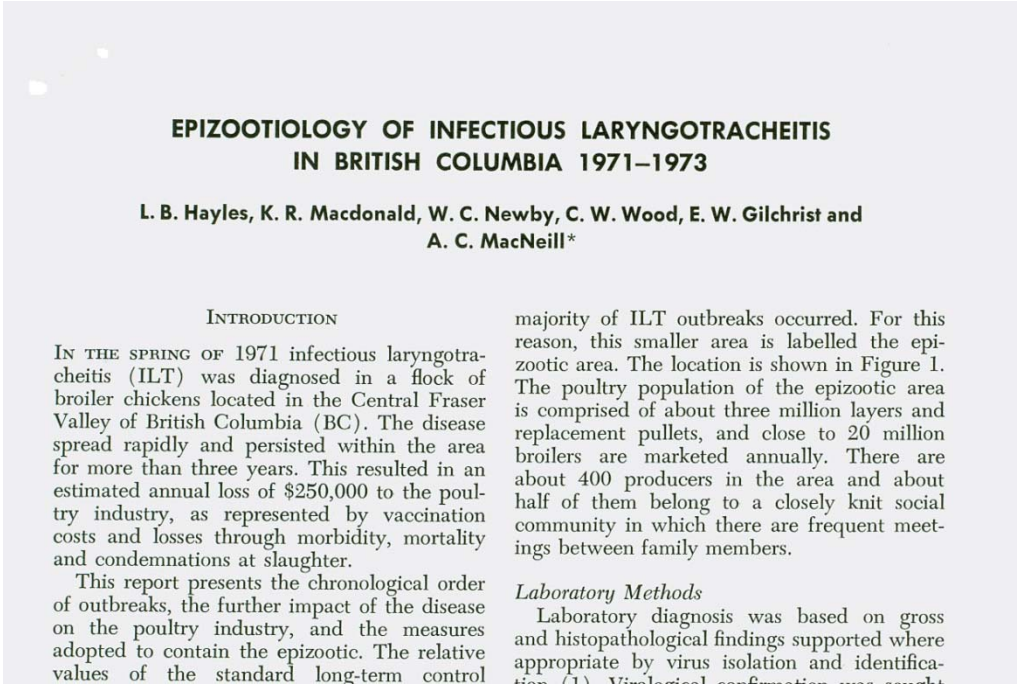
CAHLN/CAPV Meeting
June 6, 2011

Atlin
ATLIN LAKE
Lower Post
Cassiar
Fort Nelson
Telegraph Creek
Stewart
Fort St John
Dawson Creek
Mackenzie
Hazelton
Smithers
Terrace
Houston
Burns Lake
Fort St James
PRINCE RUPERT
Masset
Kitimat
Vanderhoof
PRINCE GEORGE
McBride
Queen Charlotte
QUESNEL
Valemount
Ocean Falls
Bella Coola
Williams Lake
100 Mile House
Golden
Revelstoke
Clinton
Allison Harbour
Port Hardy
Alert Bay
Port Alice
Ashcroft
Salmon Arm
KAMLOOPS
Armstrong
VERNON
Nakusp
Invermere
Campbell River
Pemberton
Lytton
Merritt
KELOWNA
Kimberley
Sparwood
Tahsis
Powell River
Peachland
NELSON
Cranbrook
Fernie
Courtenay
Squamish
PENTICTON
Princeton
Oliver
Creston
TRAIL
VANCOUVER
Hope
Grand Forks
PORT ALBERNI
Tofino
NANAIMO
Chilliwack
Ucluelet
Bamfield
Duncan
Sidney
New Westminster
VICTORIA
DIXON ENTRANCE
HECATE STRAIT
QUEEN CHARLOTTE SOUND
WILLISTON LAKE
TAKLA LAKE
STUART LAKE
BABINE L
QUESNEL L
KINBASKET LAKE
SHUSWAP LAKE
UPPER ARROW LAKE
LOWER ARROW LAKE
OKANAGAN LAKE
KOOTENAY LAKE
KOOCANUSA LAKE
HARRISON LAKE
CHILKO
STIKINE RIVER
NASS
SKEENA
FRASER RIVER
Fort Nelson
Kotcho L
Dease L
Teslin L
Taku
Inklin R
Tuya
Blue R
Dease
Turnagain
Kechika R
Muskwa R
Fontas R
Prophet
Sikanni Chief
Beatton R
Halfway
Finlay R
Ingenika R
Mesilinka R
Sustut R
Omineca R
Nation R
Pine R
Pennip R
Mc Gregor R
Fraser River
Bowron R
Willow R
Chilako R
Nechako R
Ootsa L
Francois L
Morice L
Douglas Channel
Eutsuk Lake
Caamano Sound
Dean
West Road R
Nazko R
Chilcotin R
Bella Coola R
Queens Sound
Owikeno L
Tatlayoko L
Klinaklin
Knight Inlet
Bute Inlet
Toba Inlet
Lillooet R
Bonaparte R
North Thompson
Adams L
Lake Revelstoke
Columbia
Nicola R
Lillooet R
Kootenay R
Elk R
Kootenay R
Bulkley R
Pitt R
Alsek R
Kiskatinaw R
Peritot R
Kotcho L
Fort Nelson
Muskwa R
Fontas R
Beatton R
Halfway
Pine R
Mc Gregor R
Fraser River
Bowron R
Willow R
Nechako R
Chilcotin R
Tasko L
Bonaparte R
Adams L
Columbia
Kootenay R
Elk R
Kiskatinaw R
Alsek R
60°
58°
56°
54°
52°
50°
49°
48°
138°
136°
134°
132°
130°
128°
126°
124°
122°
120°
118°
116°
114°

Distribution of Poultry Farms - FV



Historical ILT



EPIZOOTIOLOGY OF INFECTIOUS LARYNGOTRACHEITIS IN BRITISH COLUMBIA 1971–1973

L. B. Hayles, K. R. Macdonald, W. C. Newby, C. W. Wood, E. W. Gilchrist and A. C. MacNeill*

INTRODUCTION

IN THE SPRING OF 1971 infectious laryngotracheitis (ILT) was diagnosed in a flock of broiler chickens located in the Central Fraser Valley of British Columbia (BC). The disease spread rapidly and persisted within the area for more than three years. This resulted in an estimated annual loss of $250,000 to the poultry industry, as represented by vaccination costs and losses through morbidity, mortality and condemnations at slaughter.

This report presents the chronological order of outbreaks, the further impact of the disease on the poultry industry, and the measures adopted to contain the epizootic. The relative values of the standard long-term control

majority of ILT outbreaks occurred. For this reason, this smaller area is labelled the epizootic area. The location is shown in Figure 1. The poultry population of the epizootic area is comprised of about three million layers and replacement pullets, and close to 20 million broilers are marketed annually. There are about 400 producers in the area and about half of them belong to a closely knit social community in which there are frequent meetings between family members.

Laboratory Methods

Laboratory diagnosis was based on gross and histopathological findings supported where appropriate by virus isolation and identifica-

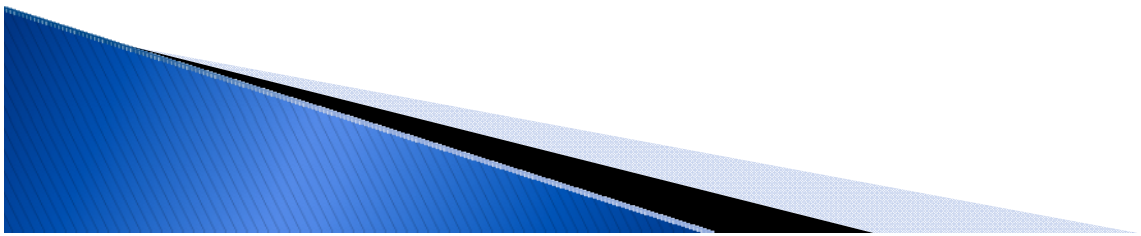
Canadian Veterinary Journal
April, 1976

- the event to start the practice of vaccination in BC
- vaccination evolved to be required of all long-lived flocks
- ILT was defined as a provincially notifiable disease

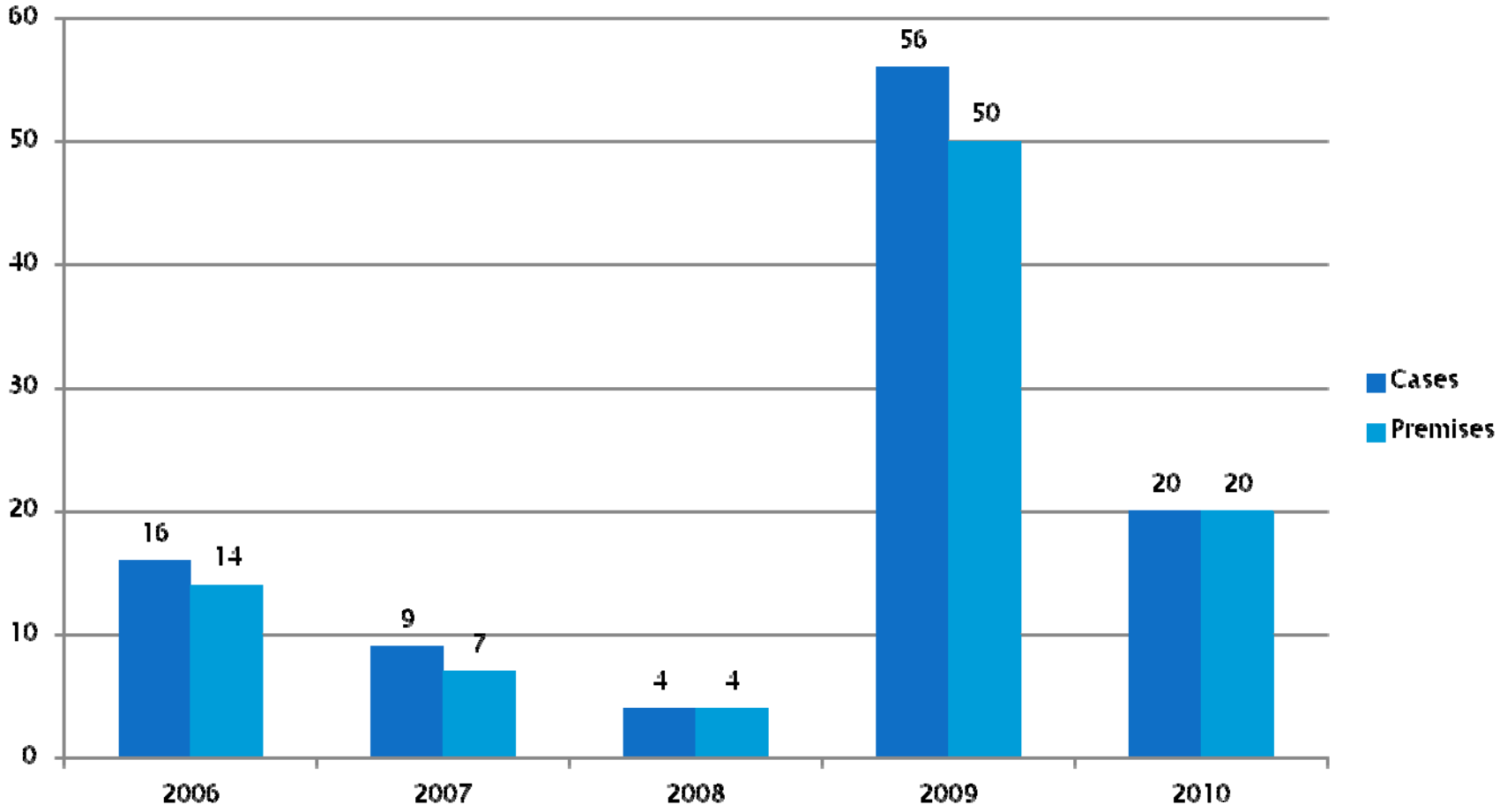
DENSIFICATION
DIVERSIFICATION
© 2006 Europa Technologies
Image © 2006 DigitalGlobe
Image © 2006 TerraMetrics
© 2005 Google
Streaming 100%
Eye alt 16244 ft

Recent History

- Prior to 2006, occasional sporadic cases of ILT would be identified
  - Usually associated with layer pullets and post-vaccination (CEO vaccine)
  - Except around 2000, small cluster in layers associated with spray vaccination of CEO vaccine
- In 2006, our first outbreak involving broiler chickens occurred
  - Usually occurred near shipping
  - Vaccination in the face of outbreak not an option (reactions, withdrawal, etc.)

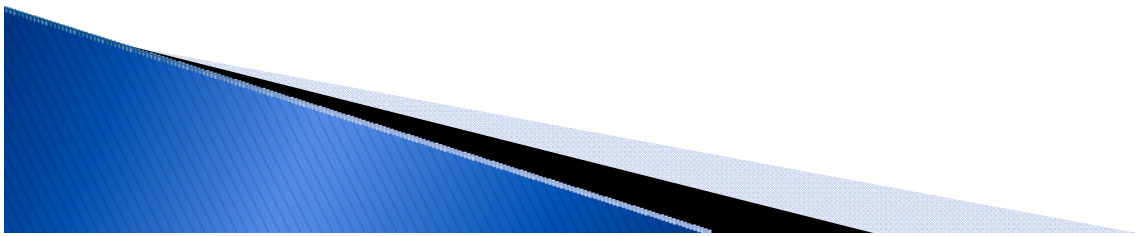


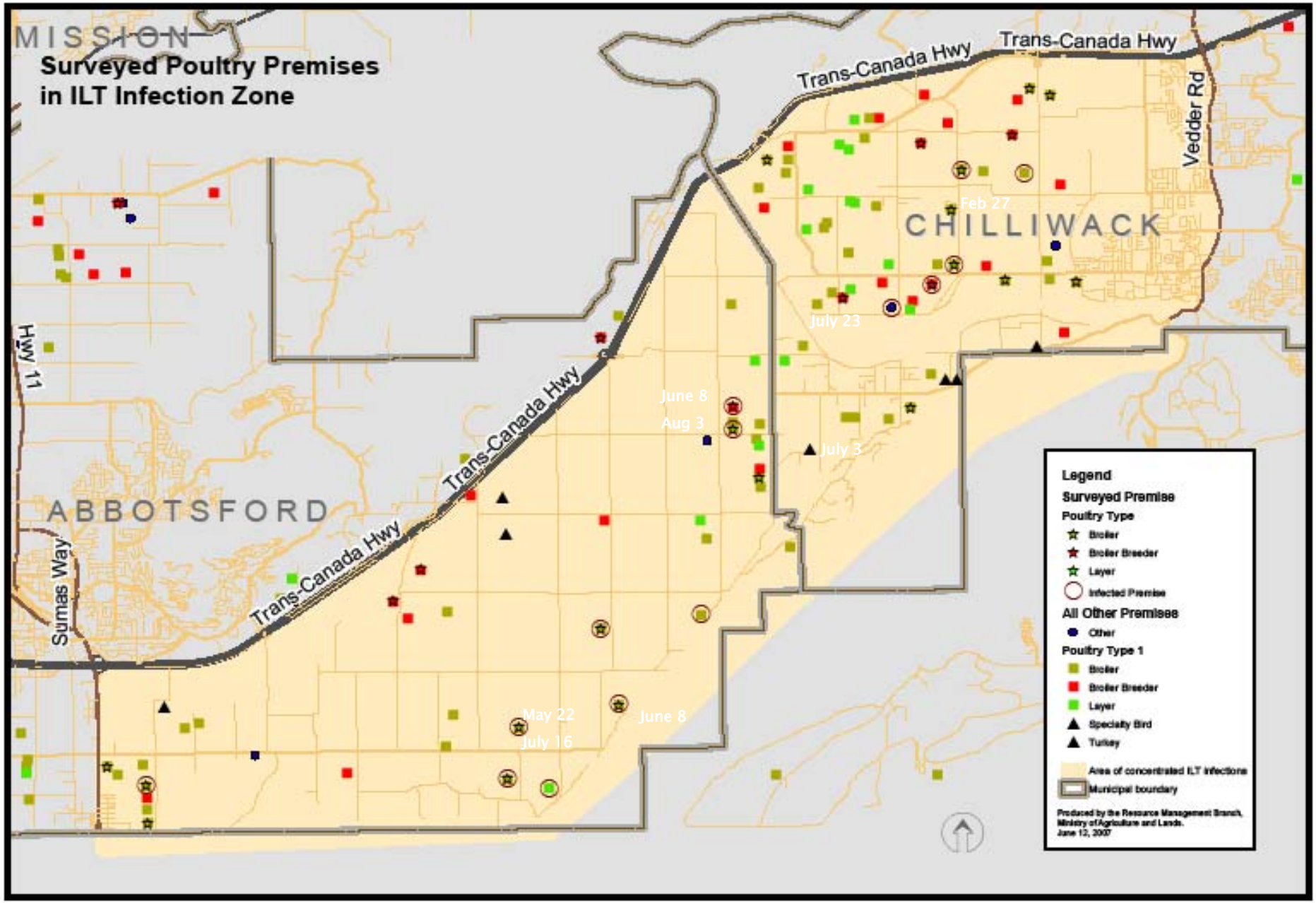
Annual Cases of ILT



Observations from Outbreak

- Case control study (2006) showed only significant risk factor to be lower level of biosecurity
- Subsequent observations suggested manure handling, downwind of infected premises, and movement of infected birds



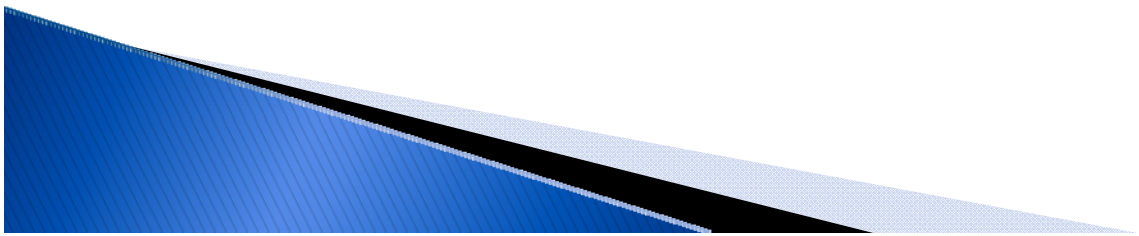

MISSION
Surveyed Poultry Premises
in ILT Infection Zone
Trans-Canada Hwy
Trans-Canada Hwy
Vedder Rd
Feb 27
CHILLIWACK
July 23
Hwy 11
June 8
Aug 3
July 3
Trans-Canada Hwy
ABBOTSFORD
Sumas Way
Trans-Canada Hwy
May 22
July 16
June 8
Legend
Surveyed Premise
Poultry Type
Broiler
Broiler Breeder
Layer
Infected Premise
All Other Premises
Other
Poultry Type 1
Broiler
Broiler Breeder
Layer
Specialty Bird
Turkey
Area of concentrated ILT infections
Municipal boundary
Produced by the Resource Management Branch,
Ministry of Agriculture and Lands.
June 12, 2007

Observations from Outbreak

- Case control study (2006) showed only significant risk factor to be lower level of biosecurity
- Subsequent observations suggested manure handling, downwind of infected premises, and movement of infected birds
- Lab workup including virus isolation, RT-PCR, and RFLP showed outbreak virus to be indistinguishable from CEO vaccine virus
- Clinical picture identical to outbreaks in other jurisdictions (i.e. VLT)

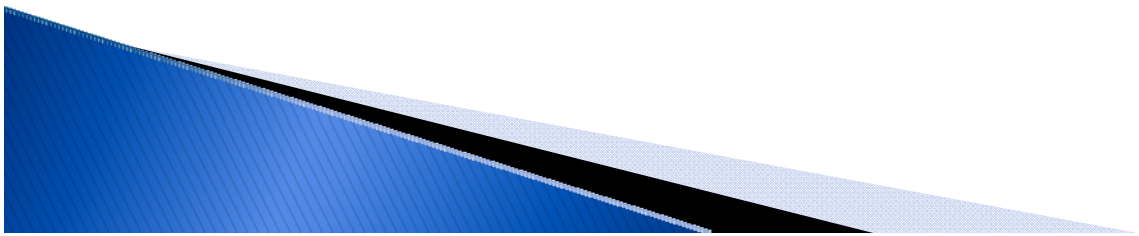
Approaches to Control

- 2007
  - Initiated a response protocol for broilers
    - Last of day pickup
    - Planned routing
    - Heat treatment / manure handling
    - Directed C&D
  - Continued to issue Notices; encouraged enhanced biosecurity
  - Approached CFIA for emergency permit for vectored vaccine – denied
  - Incidence down from 2006



Approaches to Control

- 2008
  - Same response protocols as 2007
  - Cases down significantly between ‘06 and ‘07
  - But – false sense of control this year

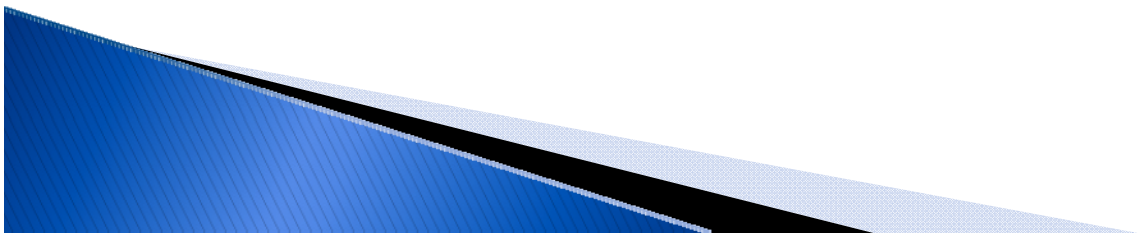


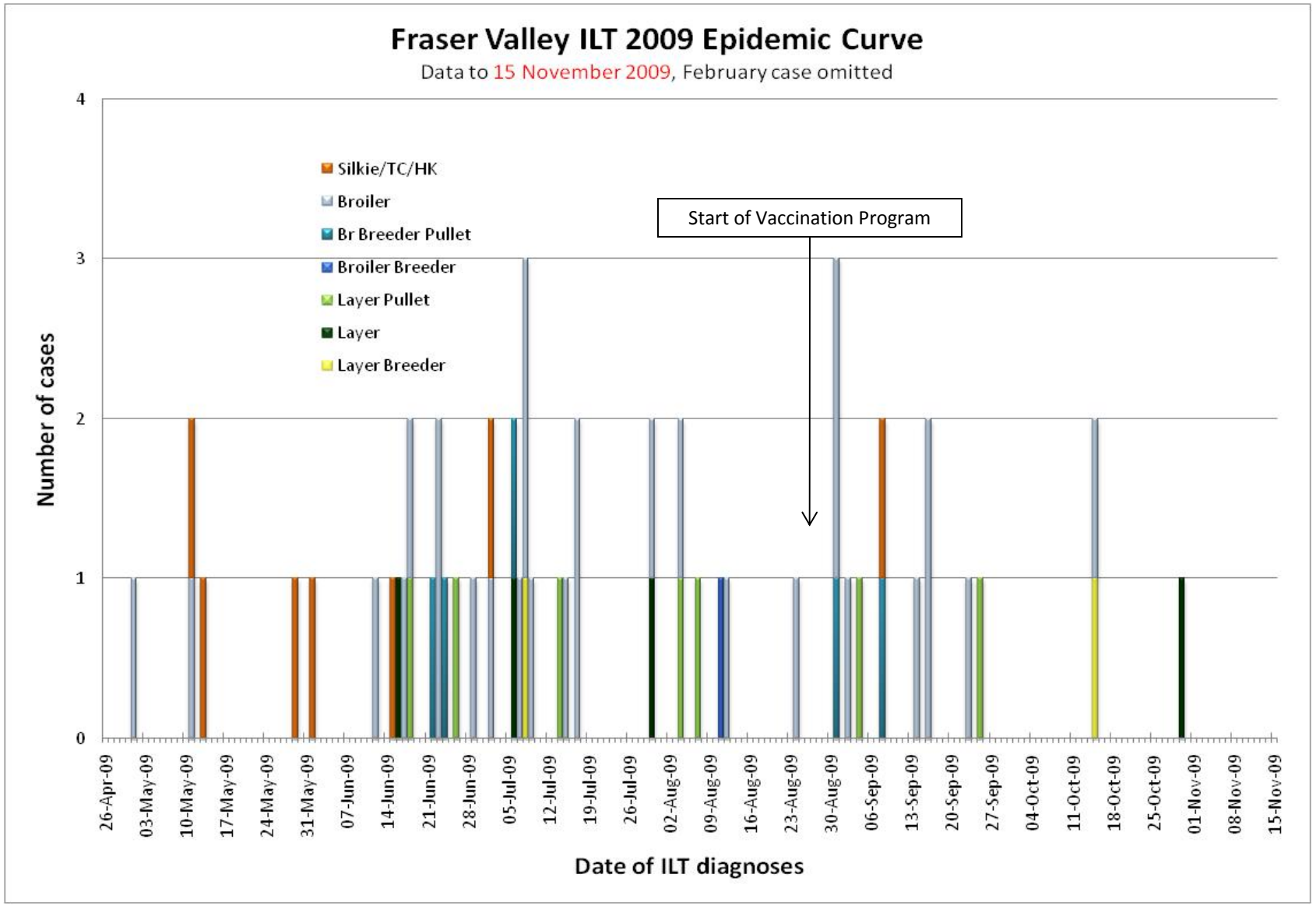
Approaches to Control

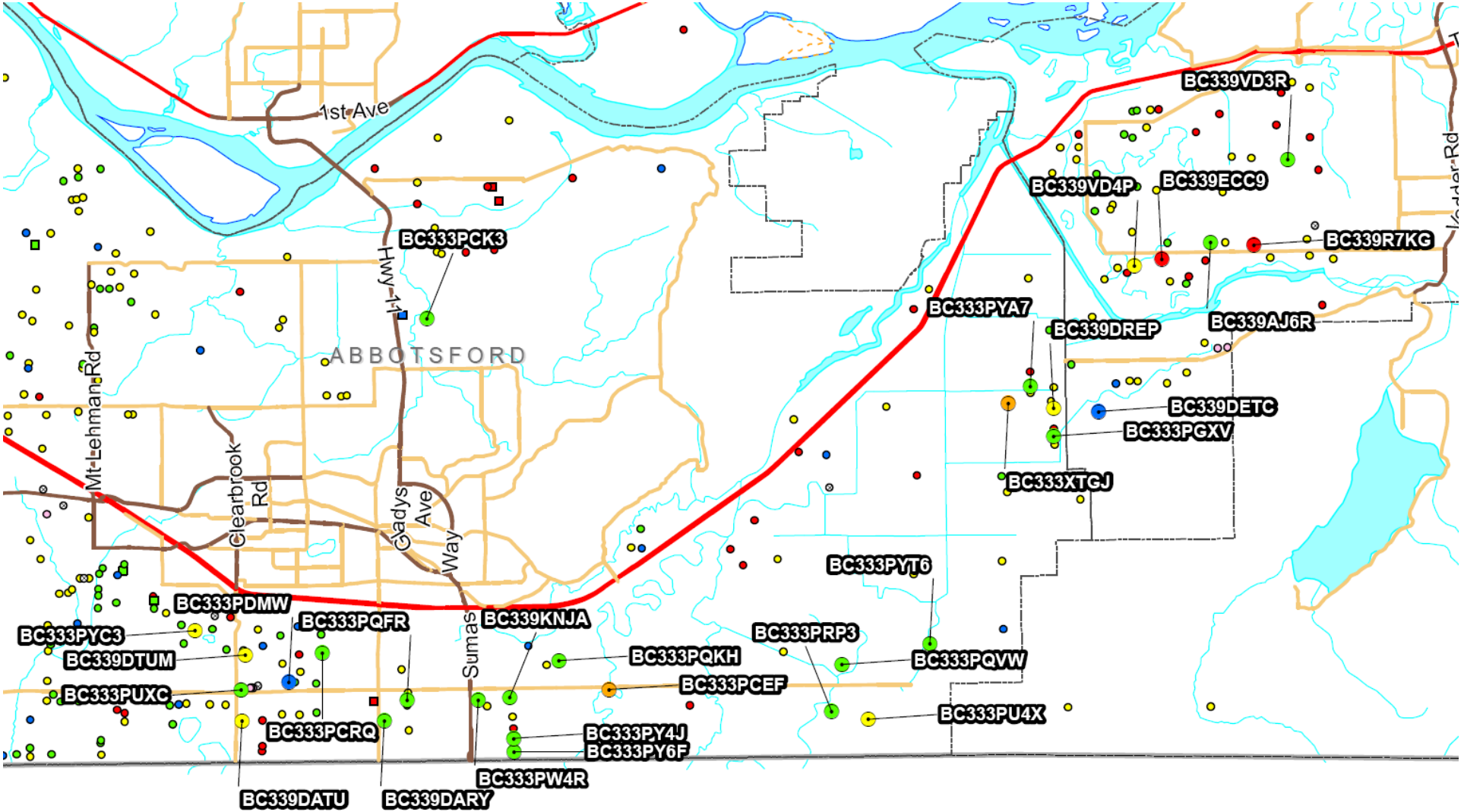
- 2009 – The Disaster Year
  - Started the year with established response protocol
  - Revisited our strategies and developed long and short term goals
  - Short-term:
    - Establishing control using greater emphasis on previous responses
    - Re-enforced need for elevated biosecurity
    - Reapproached CFIA to lobby for emergency release of vectored vaccine – after some time we were successful
    - Start vectored vaccine in broiler chickens

Approaches to Control

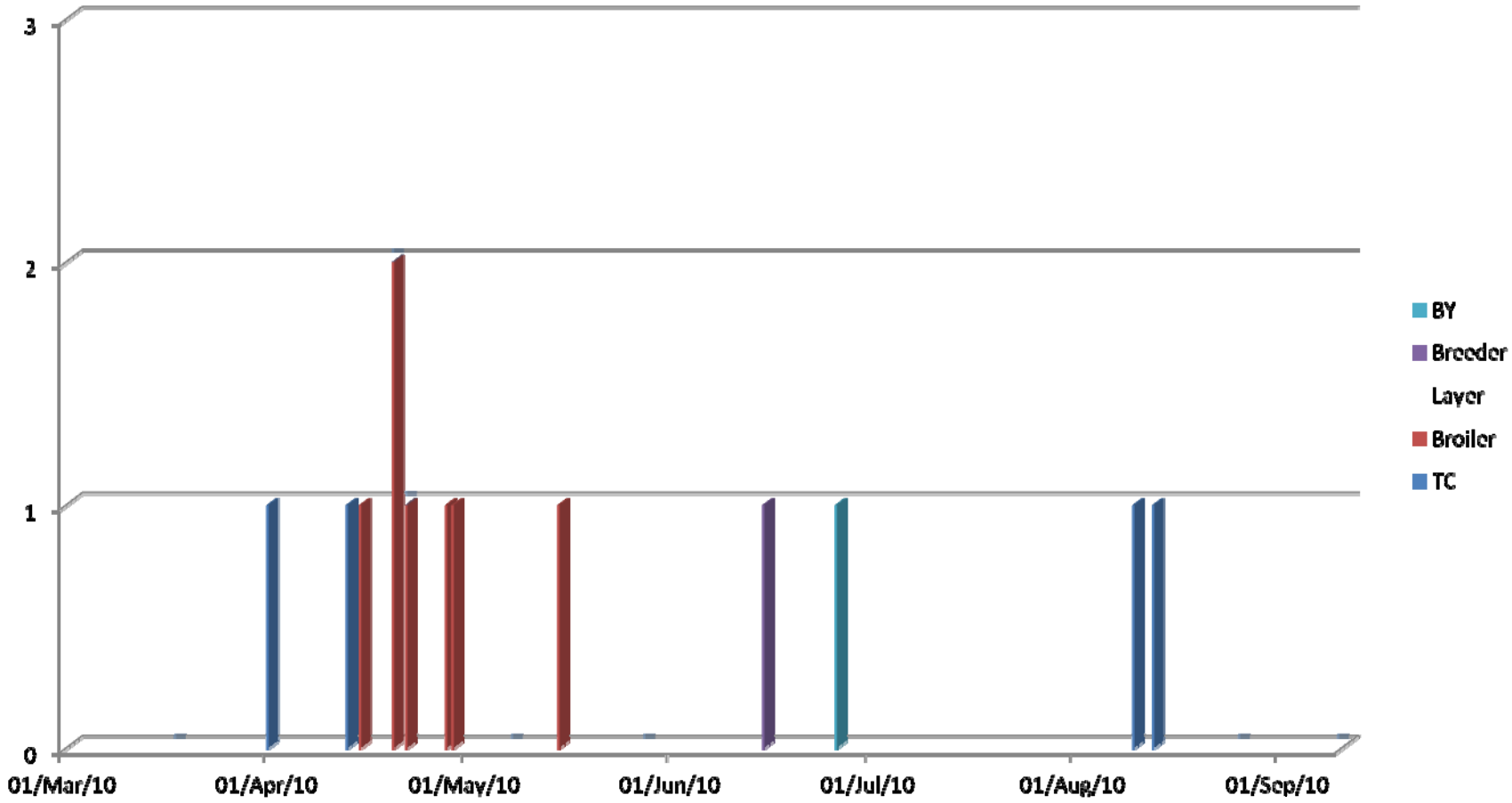
- 2009 (continued)
  - Long-term
    - Establish a more pro-active response including initiation of vaccination of broilers
    - Ongoing education on ILT
    - Discourage use of CEO vaccine
  - Specialty Birds represented a significant challenge
    - Multi-age multi-pull
    - Dressed value of ILT affected birds = severe loss
      - By the end of 2010, vaccination (vectored) of all specialty birds was being done



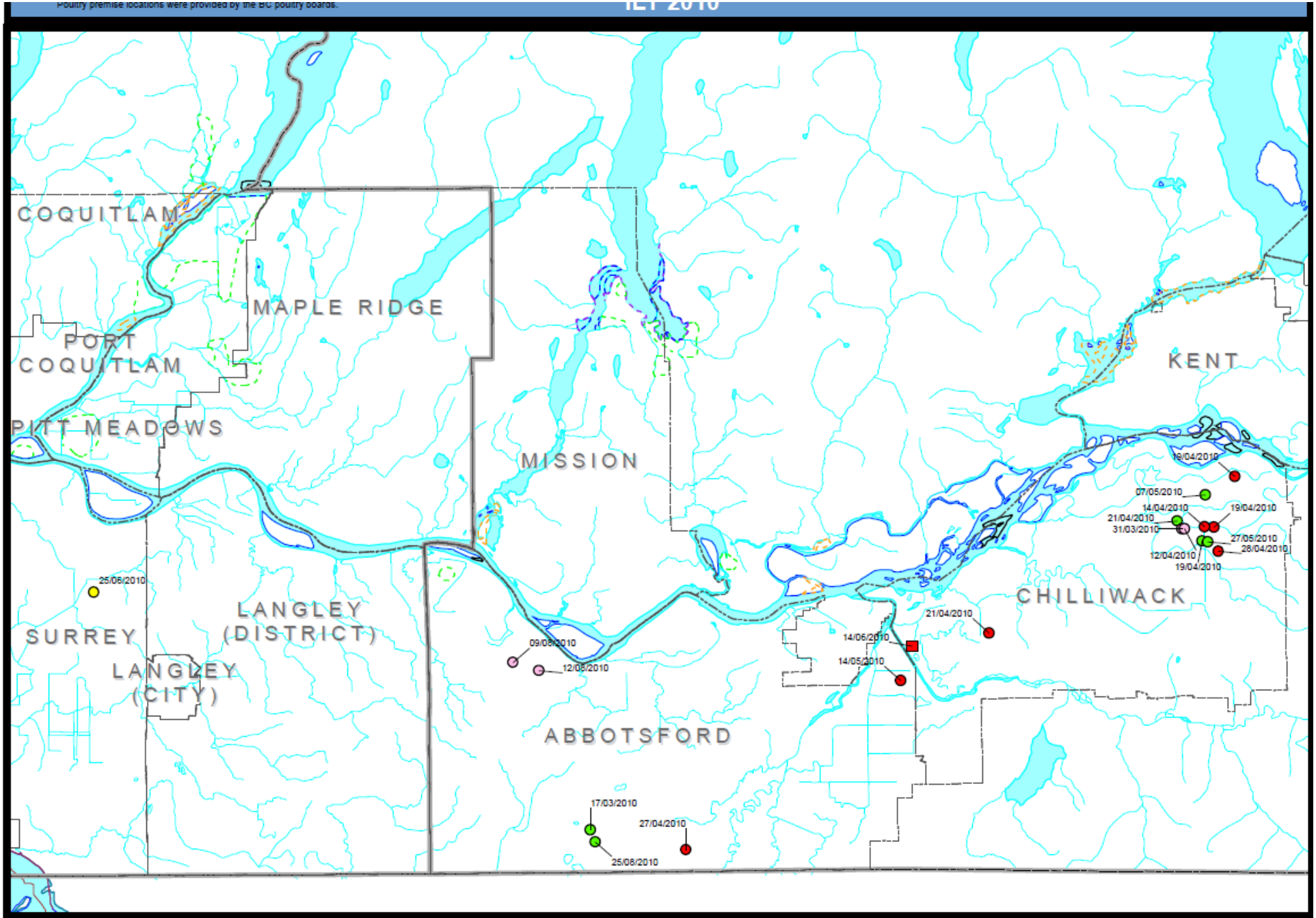

Fraser Valley ILT 2009 Epidemic Curve
Data to 15 November 2009, February case omitted
Number of cases
Date of ILT diagnoses
Silkie/TC/HK
Broiler
Br Breeder Pullet
Broiler Breeder
Layer Pullet
Layer
Layer Breeder
Start of Vaccination Program
0
1
2
3
4
26-Apr-09
03-May-09
10-May-09
17-May-09
24-May-09
31-May-09
07-Jun-09
14-Jun-09
21-Jun-09
28-Jun-09
05-Jul-09
12-Jul-09
19-Jul-09
26-Jul-09
02-Aug-09
09-Aug-09
16-Aug-09
23-Aug-09
30-Aug-09
06-Sep-09
13-Sep-09
20-Sep-09
27-Sep-09
04-Oct-09
11-Oct-09
18-Oct-09
25-Oct-09
01-Nov-09
08-Nov-09
15-Nov-09


1st Ave
Hwy 1
ABBOTSFORD
Mt Lehman Rd
Clearbrook Rd
Gladys Ave
Sumas Way
BC339VD3R
BC339VD4P
BC339ECC9
BC339R7KG
BC333PCK3
BC333PYA7
BC339DREP
BC339AJ6R
BC339DETC
BC333PGXV
BC333XTGJ
BC333PYT6
BC333PDMW
BC333PQFR
BC339KNJA
BC333PRP3
BC333PYC3
BC339DTUM
BC333PQKH
BC333PQVW
BC333PUXC
BC333PCEF
BC333PU4X
BC333PCRQ
BC333PY4J
BC333PY6F
BC333PW4R
BC339DATU
BC339DARY

Fraser Valley ILT 2010 Epidemic Curve



Poultry premise locations were provided by the BC poultry boards.



Outcomes

- Still too early to know if our strategy is having a lasting effect
- Most breeder and >50% of layer producers have stopped using CEO vaccine
- All specialty birds now vaccinated with vectored vaccine
- To date, no broiler chickens vaccinated with the vectored vaccine have been infected (reported)
- 2011 has seen only 3 cases, 2 in broilers – possibly related (all in January).

Questions?