

Surveillance of Atlantic Salmon and Arctic Charr in Iceland

Renibacterium salmoninarum

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History of Rs in Iceland

- 1968
 - first detection
- 1985-92
 - epidemic on 4 big farms
- 2003-09
 - epidemic including 18 farms
- 2006-2009
 - ratio of pos samples in wild salmon brood fish increases

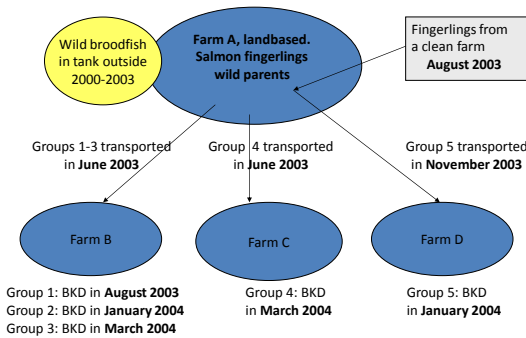
Surveillance practices:
 Aquaculture
 Brood fish – a proportion of females
 Wild brood fish for restocking
 Brood fish – every female

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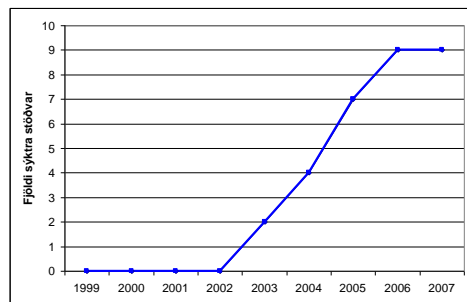
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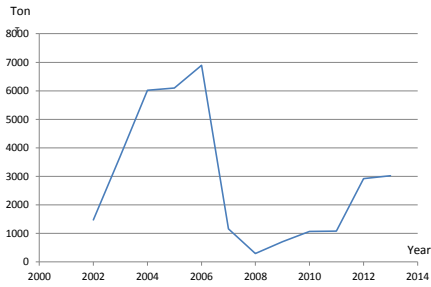
Spread of BKD in Icelandic fish farms 2003 - 2004



Number of farms infected at any given time (50% of all farms were affected).



Effects on salmon production

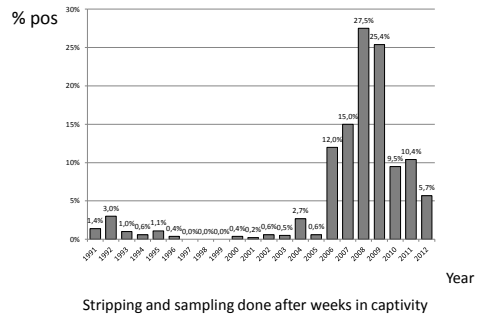


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Positive Rs ELISA in returning wild broodfish sampled for restocking purposes



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Returning salmon caught in one river but kept at different facilities until stripped

Facilities	No.	Pos ELISA %
A	142	89,4
B	15	46,7
C	46	37,0
D	33	12,1

Kristmundsson o.fl (2009) Nýrnaveiki í Laxfiskum á Íslandi. Veidimaðurinn, 188, 64-66.

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2013: incidence of Rs

Aquaculture: 0%

Wild broodfish: 3.5 %

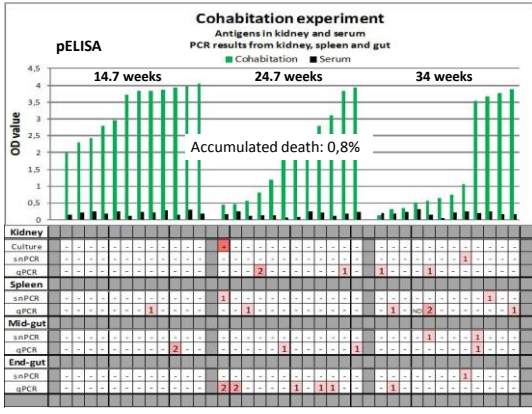
Number of fish tested: 664
 Number of rivers: 29
 Positive samples: 13 rivers



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Number of fish where either PCR was pos in one or more organs

Weeks in cohab	Positive / total no.
3.6	10/12
6.6	7/12
9.7	8/12
14.7	2/12
24.7	10/12
34	7/12

All organs and both PCR methods

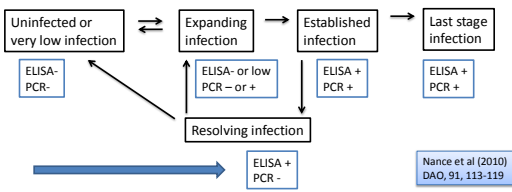
Organ	No pos samples	
	snPCR	qPCR
Kidney	9	9
Spleen	9	13
Mid-gut	6	9
End-gut	5	13
Tot	29	44

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Possible development of Rs infection / ELISA and PCR results



No single detection method is always „the best one“. Various factors may affect the „pattern of results“ obtained.

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