Willow Beach NFH
Razorback Loss to
Ichthyophthirius multifilis (ich)

Mark Olson, Project Leader, Willow Beach National Fish Hatchery
Ich Cycle

Ich infected fish

Tomites/Theronts

Dividing Tomont

Trophonts
Ich Trophont Found in River Water
Source of the Infection

River water
Leaking concrete walls
Birds
Raccoons
Other Contributing Factors

- Naive immune systems from well water rearing
- Water cooling/ spawning response
- Fish annually reduce feeding same time of year, further weakened immune response.
- Recirculating systems
## Fish Loss Numbers

### Inventory on 10/1/2016

<table>
<thead>
<tr>
<th>Year Class</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>10,403</td>
</tr>
<tr>
<td>2014</td>
<td>15,111</td>
</tr>
<tr>
<td>2015</td>
<td>10,224</td>
</tr>
<tr>
<td>2016</td>
<td>10,542</td>
</tr>
<tr>
<td>Total</td>
<td>46,280</td>
</tr>
</tbody>
</table>

### Inventory as of 1/1/2017

<table>
<thead>
<tr>
<th>Year Class</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>3,500</td>
</tr>
<tr>
<td>2016</td>
<td>10,000</td>
</tr>
<tr>
<td>Total</td>
<td>13,500</td>
</tr>
</tbody>
</table>
Rebuilding Hatchery Population

- Bring in 30,000 larvae this year, That brings the population back to 43,000
- 9,000 transferred to Achii Hanyo
- Use half of the space at Achii for RBS. Stocking size in two years.
- Continue 5 years rearing at WB
Total Razorbacks Stocked Since 2006

114,252
Question After Gregg Garnett’s Presentation