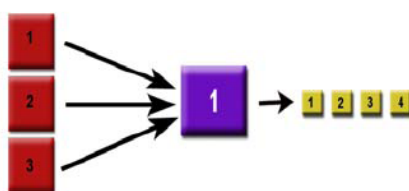


<p><b>Industry:</b> <i><b>Freshwater Finfish Aquaculture</b></i></p>	<p><b>State of Readiness Assessment:</b>  <b>Total Score =</b> <b>A</b></p>
<p><b>Industry Overview:</b></p> <ul style="list-style-type: none"> <li>Commercial freshwater finfish aquaculture in Canada is dominated by rainbow trout production. Other species farmed in Canada include Arctic char, tilapia, and other developmental species.</li> <li>Rainbow trout aquaculture operations account for approximately 97% of commercial aquaculture production in Ontario, which represented approximately 65% of Canadian rainbow trout production in 2008. Rainbow trout production represented 5.2% of total finfish production in Canada in 2008. Ontario rainbow trout production. Cage culture operations represent approximately 75% of Ontario rainbow trout production. There are 6 cage farm operators in Ontario.</li> <li>Like many aquaculture sectors, the commercial freshwater finfish aquaculture industry in Canada is subject to a strict regulatory regime. To ensure compliance and meet product quality, safety and environmental standards, some businesses have implemented traceability systems. Some businesses have also implemented traceability in order to pursue third party certification.</li> <li>The commercial aquaculture businesses that produce the majority of freshwater finfish exhibit a high level of vertical integration; their involvement in many stages of the aquaculture supply chain allows them to implement effective traceability systems covering the upstream chain from breeder to processor.</li> <li>Depending upon the specific stage in the supply chain, the identification of products within the supply chain is based upon batch/lot numbers, pen numbers and trade unit identification numbers. These designations are applied in a manner that is readily equated to the EAN trade unit/logistic unit system.</li> <li>Industry associations – Northern Ontario Aquaculture Association (NOAA), Manitoba Aquaculture Producers Association &amp; Canadian Aquaculture Industry Alliance (CAIA) as well as broadly focused provincial aquaculture associations (i.e. Aquaculture Association of Nova Scotia (AANS)).</li> </ul>	
<p><b>Supply Chain Pathways</b></p> <p>Breeder&gt; Truck&gt; Hatchery&gt; Truck&gt; Farm&gt; Boat&gt; Processor</p> <p>Breeder&gt; Truck&gt; Hatchery&gt; Truck&gt; Farm&gt; Boat&gt; Truck Processor</p>	<p><b>Unit Transformations</b></p> <p>Units may undergo multiple pooling and subdivisions between breeder and processor</p> 
<p><b>Market(s):</b></p> <ul style="list-style-type: none"> <li>Primary market is Canada with some sales to the US.</li> <li>The majority of product is either fresh dressed or fresh fillets. Value added products are also common.</li> <li>COOL and US Bioterrorism Act are the main traceability regulations of concern for product exported to the US.</li> </ul>	

<b>Product and Business Data Availability:</b>		<b>Score = 1</b>
<p>The freshwater finfish aquaculture industry records its traceability data elements in computer-based data recording systems.</p> <p><b>What product or business data is missing?</b> None. Freshwater finfish aquaculture companies collect a comprehensive set of product identity, business unit identity, product description, production history and transportation-related information</p> <p><b>Is the data electronically accessible to the supply chain?</b> Yes. Most companies maintain computer information systems which contain traceability information. The implementation of a single traceability system by all units of a vertically integrated business provides managers with easy access to unit-specific information.</p> <p><b>Is the data verifiable?</b> Vertically integrated companies are HACCP certified by the CFIA at the processor level. Companies that export product to the US are registered with the USFDA.</p>		
<b>Product Identifiers:</b>		<b>Score = 1</b>
Unique trade and/or logistic unit identifiers are used.		
<b>Data Transfer and Information Mapping:</b>		<b>Score = 1</b>
Vertical integration and computer-based traceability systems facilitate the effective transfer of information.		
<b>Industry Leadership</b>		<b>Score = 2</b>
Multiple provincially based organizations represent industry. NOAA represents approximately 65% of Canadian rainbow trout production. The CAIA does represent the aquaculture industry including freshwater finfish companies across Canada as a whole.		
<b>Processor Level Constraints</b>		<b>Score = 1</b>
There is a strong link between the farm and processor levels due to vertical integration and production linked to market requests.		
<b>Factors impeding ability to meet traceability:</b>	<b>Factors aiding ability to meet traceability:</b>	
<ul style="list-style-type: none"> <li>• Repackaging of product at the market level.</li> </ul>	<ul style="list-style-type: none"> <li>• Vertical integration of upstream supply chain.</li> <li>• Computer based traceability systems.</li> <li>• Good product unit identification.</li> <li>• Good linkages between inputs and outputs.</li> <li>• Comprehensive data collection.</li> <li>• Good appreciation of benefits of traceability.</li> </ul>	
<b>Opportunities:</b>		
<ul style="list-style-type: none"> <li>• Maintain verifiable traceability information through third party audits.</li> <li>• Exchange traceability information with other supply chain partners using a globally recognized standard such as the EAN/UCC system.</li> </ul>		