



The Diversified RAS Farm

Aquaculture Innovation Workshop 6

Vancouver BC

October 27th 2014

Justin Henry

Outline

- Target's RAS Timeline
- Smolts in RAS
- Sturgeon in RAS
- Coho in RAS
- Plants in RAS

RAS Timeline at Target Marine

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Atlantic smolts																	
Sturgeon juveniles																	
Sturgeon growout																	
Chinook smolts																	
Coho smolts																	
Coho broodstock																	
Atlantic growout																	
Coho growout																	
Plants																	

Smolts (1998)

- Value proposition
 - High demand
 - High value (each)
 - Short production cycle
- Benefit of RAS
 - Minimize water requirements
 - Increase environmental control

Smolts (1998)

- Increase environmental control
 - Year round optimal rearing conditions
 - Shorten production time
 - Keep disease out
- Bit of advice
 - Only allow disease free fish to enter your system
 - You can grow any species

Sturgeon (2001)

- Value proposition
 - High value roe
 - Niche market
 - Long production cycle
- Benefit of RAS
 - Minimize water requirements
 - Increase environmental control

Sturgeon (2001)

- Increase environmental control
 - Shorten production time
 - Year round optimal rearing conditions
 - Control of maturation
- Bit of advice
 - Need year round harvest (and year round inputs)

Coho (2007)

- Value proposition
 - High value roe (ikura)
 - Dark red flesh
 - Fast growth rate
 - Short production cycle
- Benefit of RAS
 - Minimize water requirements
 - Increase environmental control

Coho (2007)

- Increase environmental control
 - Year round optimal rearing temperatures
 - Shorten production time
 - Control of maturation
 - Keep disease out
- Bit of advice
 - Grow females (prevent jacking, increase roe)

Plants (2014)

- Value proposition
 - Huge market
 - Growing market for organic
 - Shortfall in supply of many crops
- Benefit of Aquaponics
 - Free water
 - Free food
 - Free heat
 - Consume NO_3^-
 - Free CO_2
 - No weeds
 - No soil pests



Target Marine Hatcheries Ltd

Target Marine Hatchery Site

7333 Sechelt Inlet Road, Sechelt, British Columbia, Canada, V0N 3A4

Has been evaluated by Global Trust Certification Ltd, in accordance with the requirements of ISO Guide 65 and the process was found to meet the organic production requirements of

Canadian General Standards Board Organic Aquaculture Standard CAN/CGSB-32.312-2012

Registration No: CANORG1006

Product: **White Sturgeon** (*Acipenser transmontanus*)
Coho Salmon (*Oncorhynchus kisutch*)
Caviar (*Acipenser transmontanus*)
Aquatic plants grown in conjunction with the
aquaculture facility

Date of Evaluation: 14th August 2014

Certificate Issue Date: 22nd September 2014

Re- Evaluation Due Date: 14th August 2015

Certificate Expiry Date: 9th October 2015

Signed on behalf of Global Trust Certification Ltd at Head Office, Dundalk:

Mr Bill Paterson
Operations Manager



Farming Salmon in RAS

Disease
Free



Monosex
Female

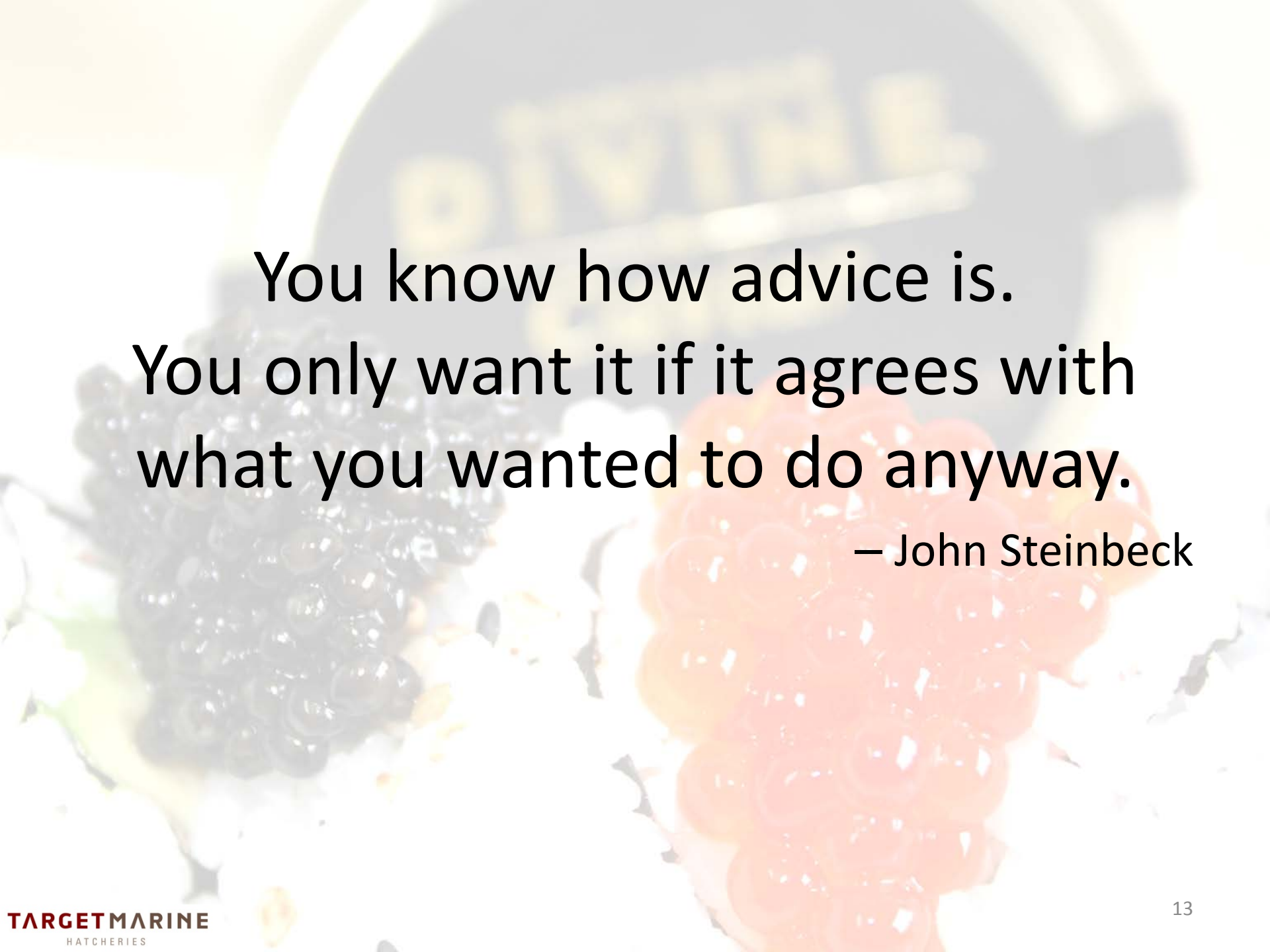


Year Round
Availability



Certified
Organic





You know how advice is.
You only want it if it agrees with
what you wanted to do anyway.

— John Steinbeck



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