For Discussion Purposes Only

A New Approach to Producing Natural and Sustainable Fresh Salmon

SWEETSPRING

TASTE BEYOND THE SEA

February 2012

A New Approach to Producing Natural and Sustainable Fresh Salmon

- Contents -

I. Introduction

Over the last 30 years, worldwide consumption of seafood and freshwater food supplies has increased dramatically. Four primary factors have driven this increase in demand.

- As more people have become better off economically, their consumption of new or previously untried protein food types has increased.
- Worldwide, populations are growing rapidly and there are now 7 billion people inhabiting the planet.
- Dramatic improvements in transportation methods and costs have enabled seafood to be introduced to new markets.
- Significant developments in aquaculture have increased the worldwide supply of seafood.

Per-capita consumption of seafood, worldwide, has increased since the 1960s at an approximate compound annual rate of 13.4%. Seafood supplies have thus far kept pace with consumption increases, with China and East Asia accounting for a disproportionate share of the increases in worldwide seafood supply. From 1994 to 2005, China's share of worldwide seafood production increased from 21% to 35%. During this period, China was a large exporter of seafood. In 2010 this status changed, when China became a net importer of seafood, for the first time.

Two important terms in discussing seafood consumption and supply are "wild" and "aquaculture production." Wild seafood harvested by various fishing methods, while aquaculture production refers to seafood grown in captivity. Wild fish refers to all kinds of harvesting of naturally occurring living resources in both marine and freshwater environments. Different aquaculture methods include sea-pen farming and land-based aquaculture, utilizing tanks or ponds fed by fresh or salt water.

Many wild stocks are currently overexploited, and the international nature of the resources makes them difficult to manage. Capture production has remained essentially constant since the mid-1980s, while aquaculture production has risen at rates sufficient to maintain compound annual increases in total seafood production. In 2006, aquaculture accounted for 47% of the worldwide seafood supply. In 2011, that percentage exceeded 50% for the first time.

Our focus is on one seafood species, salmon, and specifically, Pacific Coho salmon. In order to understand salmon's place in the overall supply and consumption of seafood one must explore the data on salmon and salmon supply, as well as salmon consumption.

Reference - Food & Agriculture Organization (FAO): *"The State of World Fisheries and Aquaculture 2008"*

A. Objectives

The objectives of this booklet are to provide the reader with:

1. a broad understanding of the issues involved in seafood production;
2. a general familiarity with salmon and salmon production;
3. an introduction to the evolution of SweetSpring Salmon, Inc.; and
4. information about the market and economic potential of SweetSpring©.

We believe that SweetSpring brings an important new dimension to the salmon world and offers significant opportunities to its investors, employees, partners, and suppliers. SweetSpring provides new employment opportunities, as it expands its production capabilities and capacity. It offers investors potential, long-term sustainable returns. It gives landowners with suitable, non-producing properties and appropriate water rights opportunities to convert such properties into productive resources. Though certainly not a solution to the entire set of issues involved in salmon production, SweetSpring can potentially make a positive contribution dent.

B. Background

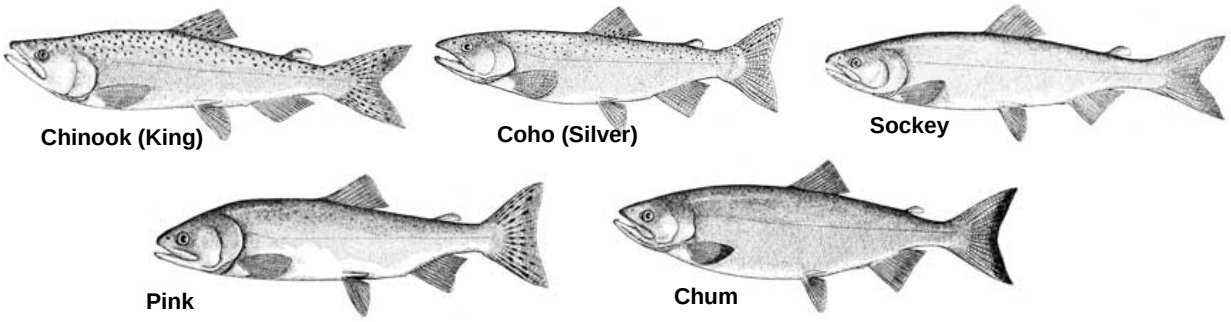
Salmon is one of the world's most popular food fish, in North American, European and Far Eastern markets. Salmon aquaculture has been one of the fastest growing sources of seafood in the entire world. As a proportion of total seafood supply and production, salmon is still just a relatively small fraction.

Different species of salmon occur in both the Atlantic and Pacific oceans. Atlantic salmon are found naturally in the North Atlantic, from the north coast of Spain, throughout Scandinavia, and in the waters of Greenland, Iceland, Ireland and the United Kingdom. There are not true sub-species of Atlantic salmon but rather differences in characteristics of a single species based on geographic influences.

In the Pacific, there are five primary species of wild salmon:

- Chinook (King);
- Coho (Silver);
- Sockeye (Red);
- Pink (Humpy or Humpback); and
- Chum (Dog and Keta).

Chinook or King Salmon are the largest Pacific salmon species, with individual fish weighing up to 125 lbs. However, they also represent the smallest population by numbers. The most plentiful species are Pinks, which are also the smallest of the salmon species. The three species most valued for fresh consumption are Chinook, Coho and Sockeye. Pink and Chum are primarily used for canning and freezing. The illustrations below show the five principal Pacific Salmon species.



Two additional species, Steelhead and Cutthroat, are classified as “sea-run trout” but have genetic characteristics more closely related to salmon.

Salmon Farming

Atlantic salmon represents the overwhelming proportion of all farmed salmon, in the world. Farmed Atlantic salmon are grown in salt water net pens in both the Atlantic and Pacific oceans. Salmon aquaculture production grew over ten-fold during the 25 years from 1982 to 2007. Leading producers of farmed salmon are Norway with 33 percent, Chile with 31 percent, and other European producers with 19 percent. Scotland and Canada are also significant producers.

There is currently much controversy about the ecological and fish health impacts of intensive sea pen salmon farming. There are particular concerns about the impacts on wild salmon and other marine life. The concerns about potential adverse impacts of salmon aquaculture are real and are being proven justified with increasing frequency.

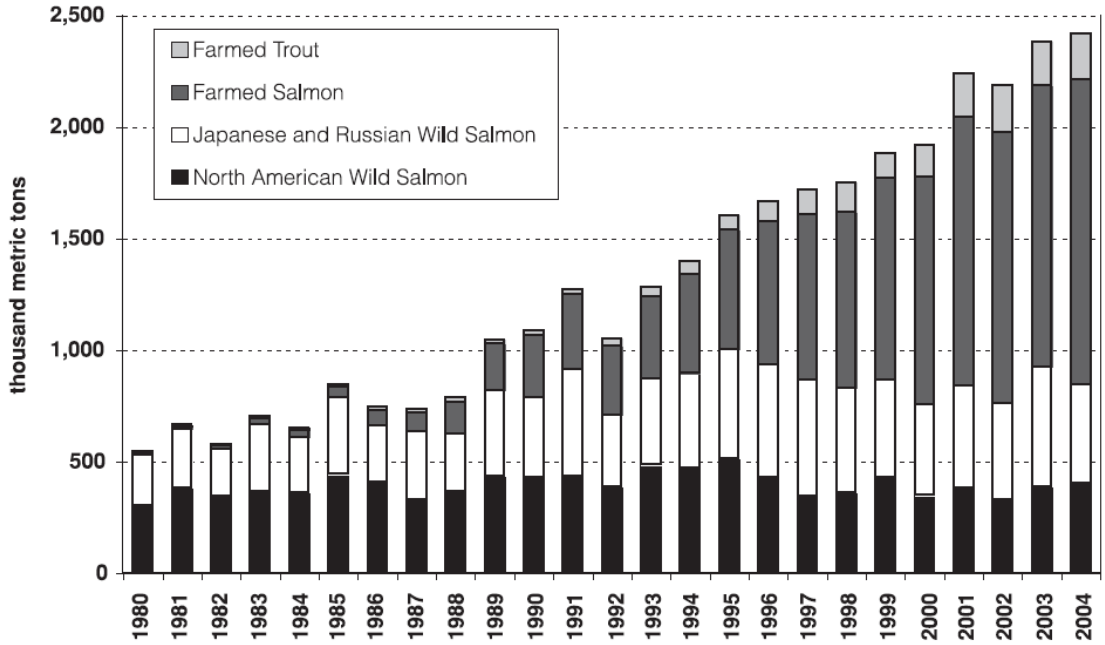
Methods of salmon aquaculture originated in late 18th century fertilization trials in Europe. In the late 19th century, salmon hatcheries were used in Europe and North America. From the late 1950s, enhancement programs based on hatcheries were established in the United States, Canada, Japan and the USSR. Many people believe that the most prevalent contemporary technique using floating sea

cages originated in Norway in the late 1960s. In fact, it was originally developed in Puget Sound, in the mid-1960s.

Modern salmon farming systems are intensive. Their ownership is quite concentrated and often under the control of large international corporations. In 2003, nearly half of the world's farmed salmon was produced by just five companies.

Wild salmon stocks are at best static, in terms of total volume, and declining, in real terms. Aquaculture may be part of the solution to sustaining future salmon stocks but current sea-pen farming methods are probably not the best approach. Chart #1 on the following page illustrates the relative proportions of worldwide salmon and trout production from 1980 through 2004.

Chart #1
Worldwide Salmon and Trout Production 1980 - 2004



Source: All data are FAO Fishstat+ data except that data (used to calculate North American wild salmon catches) for Alaska are CFEC Alaska Salmon Summary Data 1980-2005 and data for the Pacific Northwest are NMFS catch data. "Farmed trout" includes only farmed rainbow trout raised in salt water.

As the chart clearly shows, trout represents a relatively insignificant proportion of the total supply. Much more important are the relative proportions of farmed and wild-caught salmon. As one can see, the overall increase in production is attributable exclusively to farmed production.

Continuing and increasing concerns about the potential adverse affects of sea-pen salmon farming are resulting in widespread opposition to any new sea pens in North Pacific waters, in Canada and the U.S. In Oregon and

Northern California, concerns about endangered wild salmon stocks prompted both states to enact a total 2-year ban on all wild salmon fishing; both commercial and recreational. Many knowledgeable observers have suggested much longer bans as the only hope of replenishing endangered wild salmon. Some more stringent environmentalists and advocates for wild salmon preservation want to protect wild salmon simply as wild. Many of these people are not at all concerned with building up wild salmon fisheries for the purpose of creating greater resources for human consumption.

Of course, as with any highly-charged conflict among differing interest groups, emotions run high and intransigence, on all sides of the issues, is the norm. Environmentalists assail both commercial fishermen and salmon farmers. The former "*wantonly kill dolphins*" and the latter are "*destroying the future"*. Commercial fishermen blame salmon farming for their own declining wild stocks and depressed prices. Sea-pen salmon aquaculture operators face rising costs and significant regulatory constraints, as well as very real business risks from sea-borne diseases.

Continuing on the current course will mean that, eventually, everyone loses.

It should be painfully obvious that, on a worldwide basis, we need solutions for achieving sustainable salmon stocks that do not continue to pose the problems of our current capture and aquaculture production systems. As discussed earlier in the Simon Fraser University report, management of fisheries on an international scale is extremely difficult. It requires transparency and cooperation among countries and constituent interests, including commercial fishermen, aquaculture producers, consumer groups and environmental advocates.

In short, we need solutions that will:

1. protect and enhance our wild salmon fisheries;
2. dramatically improve the health and safety of our aquaculture methods; and
3. provide the levels of increased production necessary to meet future demand.

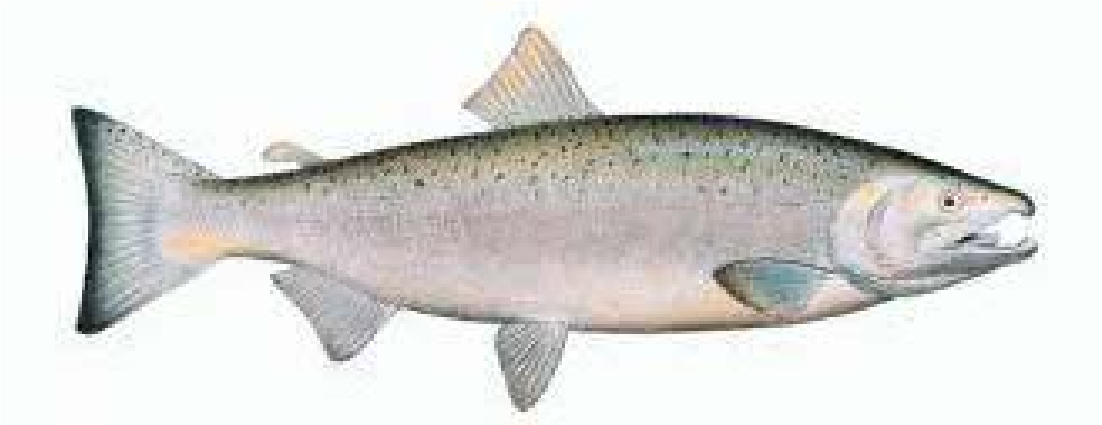
None of these goals can possibly be achieved unless the warring factions set aside their explosive rhetoric and work together to achieve their blatantly obvious common ends.

Happily, these issues are receiving increased attention and, in many instances, cooler heads are beginning to prevail. All over the world, more enlightened fisheries management professionals are seeking out new approaches to conserving wild salmon stocks and, at the same time, improving the health and safety of salmon aquaculture.

II. SweetSpring

The Coho Connection

Pacific Coho salmon are among the most popular seafood in the world. Also called “Silver Salmon”, Coho have dark metallic blue or greenish backs, silver sides and light bellies. They have a distinct pattern of small black spots on their backs and upper lobes of their tails. Like other Pacific Salmon species, wild Coho are born in the headwaters of rivers and migrate to the sea, returning to their birth places to spawn and die.



Mature Adult Pacific Coho

Adult Coho weigh an average of approximately 8 pounds, although trophy fish can weigh up to 36 pounds. The illustration above shows a mature fish, at the stage of life just prior to entering the mouth of the river in which it was born. As the salmon move toward their spawning grounds, their features and coloration change. The illustrated fish is in just the beginning stages of that process, with its mouth beginning to show frontal ‘hooking’ and its color just beginning to show a tinge of pink. As the fish progress upstream, the hooking becomes more pronounced and the color develops into a vivid shade of red. The photo below shows an adult Coho, before it begins the process of returning to spawn.

Coho are naturally quite hardy. They are among the most prized salmon by chefs and knowledgeable consumers. Although differences in the location of fisheries and diet do result in differences in color and flavor, Coho flesh is generally in the mid-range of salmon species for color. Coho flavor is generally somewhat milder than Sockeye and generally similar to Chinook or King salmon.

Fresh Raw Coho Filet

Like other salmon, Coho is easy to cook and can be prepared in a number of ways. The flesh tends to be softly firm and not too dense, an excellent texture for different preparations, including pan frying, grilling and baking. It can be smoked using either warm or cold processes and cured as Gravlax, Crudos or Ceviche.

Gravlax is a Nordic dish consisting of raw salmon, cured in salt, sugar, and dill. Gravlax is usually served as an appetizer, sliced thinly and accompanied by a dill and mustard sauce, usually on bread of some kind, or crackers. Crudo is the Spanish word for raw. Crudos, when applied to seafood, is raw seafood cured in citrus and spices and usually cut into small oblong, bite-sized pieces. Ceviche (also spelled cebiche or seviche) is a seafood dish popular in the coastal regions of the Americas, especially Central and South America. The dish is typically made from fresh raw fish marinated in citrus juices such as lemon or lime and spiced with chilli peppers. Additional seasonings such as onion, salt, coriander/cilantro, and pepper may also be added.

A. A New Kind of Coho

An important contribution to the overall solution for sustainable salmon stocks has been developed in Western Washington, south of the State Capitol of Olympia. Over a 40-year period, biologists and food scientists from SweetSpring Salmon, Inc. have been selectively breeding Pacific Coho Salmon, in land-based tank systems, and ‘teaching’ the most hardy salmon to remain in fresh water for their entire lives. It is essential to understand that this is a breeding program. It does not involve employing any genetic modification. It is as natural as the result of tall men and women marrying and producing tall children.

With all of the controversy over sea-farmed salmon, some people tend to forget that not all aquaculture is harmful. Some, in fact is as good as the best, most

sustainable wild seafood. Farmed oysters and Rainbow Trout, grown in the U.S. and Canada, along with SweetSpring Coho, have received the highest, 'Super Green' rating from the Monterey Bay Aquarium's Seafood Watch program. [See 2009 report excerpt at Appendix B] Aquaculture, itself, is still a relatively immature development in food production. In agriculture and livestock production, which have existed for many thousands of years, there are both good and bad farming methods.

There is great fanfare over organic foods. In a very real sense, almost all food is organic. The defining difference is whether food is raised or developed naturally, without the use of chemicals, and, in the case of animals and seafood, treated humanely. Many of us want to know where our food comes from, who produced it and how it was raised or harvested (caught). Cattle are raised naturally on grass, not corn. We also want to know that the food we enjoy will be available to our grandchildren, and their grandchildren.

SweetSpring Salmon represents a new and unique form of salmon aquaculture, very different from traditional methods. SweetSpring is, in fact, a new breed of "Salmon Conservationists". As mentioned earlier, SweetSpring Salmon are the result of a 40-year breeding program that has, over successive generations, produced Pacific Coho salmon that live their entire lives in fresh water.

As with breeding in any species, great care must be taken to prevent 'inbreeding'. Inbreeding weakens the genetic diversity and integrity of the offspring produced. The scientists at SweetSpring carefully selected breeding pairs from different, distinct 'families' to assure that they were not closely related to each other.

As the saying goes, "only the strong survive". With each successive generation, the strongest specimens began to thrive in exclusively fresh water. An important factor in the program is the quality of the water used. SweetSpring scientists used only pure, natural spring water from underground aquifers and introduced further 'Biofilter' purification techniques in the process. Interestingly, these special Breeding Program Coho were found to be able to still live in the sea, without any ill effects.

Manifest advantages of land-based fresh water salmon aquaculture include:

- no damage to the environment;
- no potential harm to wild salmon stocks;
- disease-free fish, without using any antibiotics;
- up to 98% clean water recycling and return to the aquifer;
- no wasted feed;
- high fish welfare; and
- bio-secure production.

In addition, all effluent (fish excrement) becomes nitrogen-rich, organic fertilizer.

B. The Beginnings

SweetSpring began in 1969, as Domsea Farms, Inc., owned by Union Carbide and subsequently acquired by Campbell Soup in 1979. Its original business under both Union Carbide and Campbell Soup was the production of pan-size Coho as a unique seafood product grown in saltwater net-pens. As a part of that business, the proprietors began a selective breeding program to raise Pacific Coho salmon, completely in freshwater for biosecurity benefits.

In 1991, AquaSeed Corporation owned by Per Heggelund, acquired the Domsea pedigree from Campbell Soup and moved the operation to its current location in Rochester, Washington. AquaSeed Corporation sold eyed eggs to salmon farmers around the world.

C. Focusing on Food Fish

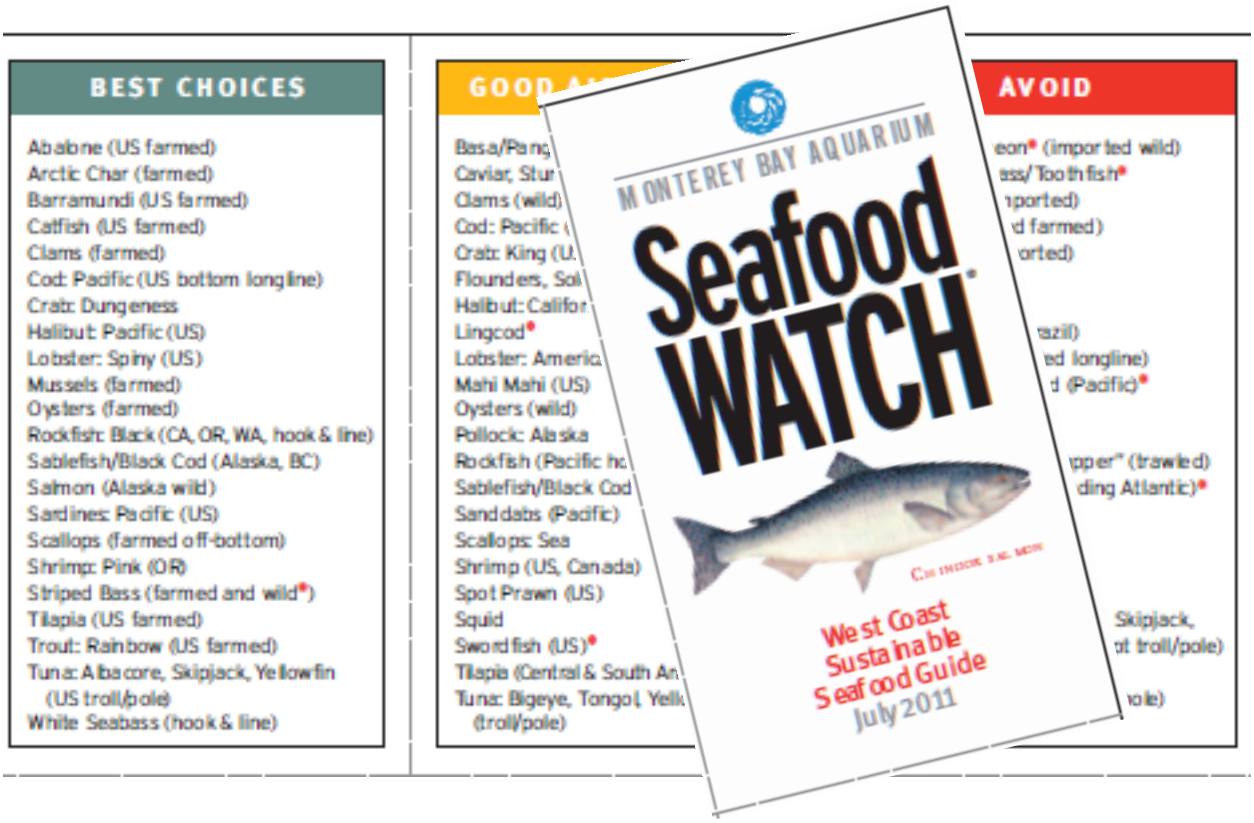
AquaSeed continued to develop and refine the Domsea pedigree. Over time, the company also refined the growing methods and re-engineered the facilities. By 2006, it had perfected the growing process to the point that they could produce a consistent, reliable and large food size Coho in freshwater using water recirculation technology.

By 2009, AquaSeed, with its branded SweetSpring Coho Salmon, was getting national attention and recognition. Over the next three years, things really began to take off. In 2009, the Monterey Bay Aquarium's Seafood Watch researchers came to visit and conduct an investigation of the operation and the product. In 2011 AquaSeed Corporation was renamed Sweet Spring Salmon, Inc. to stress its focus on food fish production rather than sales of eyed eggs.

"When Monterey Bay Aquarium speaks, fish listen"

Monterey Bay's internationally-recognized Seafood Watch program is effectively the 'Gold Standard' in seafood sustainability.

With the goal of keeping oceans healthy by helping consumers and businesses make good choices about the seafood they buy. Seafood Watch publishes a guide that ranks the environmental effects of various types of seafood using color-coded categories based on "Best Choice" (green), "Good Alternatives" (yellow) and "Avoid" (red).



Monterey Bay Aquarium's Seafood Watch® program evaluates the ecological sustainability of wild-caught and farmed seafood commonly found in the United States marketplace. Seafood Watch® defines sustainable seafood as originating from sources, whether wild-caught or farmed, which can maintain or increase production in the long-term without jeopardizing the structure or function of affected ecosystems. Seafood Watch® makes its science-based recommendations available to the public in the form of regional pocket guides that can be downloaded from www.seafoodwatch.org. The program's goals are to raise awareness of important ocean conservation issues and empower seafood consumers and businesses to make choices for healthy oceans. Each sustainability recommendation in the regional pocket guides is supported by a Seafood Report. Each report synthesizes and analyzes the most current ecological, fisheries and ecosystem science on a species, then evaluates this information against the program's conservation ethic to arrive at a recommendation of "Best Choices", "Good Alternatives" or "Avoid".

In its 2009 Seafood Report on "Farmed Fresh Water Coho Salmon", the report stated,

"This report focuses on the sole commercial producer at the time of writing, Domsea Farms owned by AquaSeed Corporation, as a representative example of the industry.

Seafood Watch's Senior Science Manager, Geoffrey Shester, said,

"*This is extremely exciting. It's not an experimental science project. It is mature to the point where there is real potential to scale it up.*

Seafood Watch's "**Super Green**" list indicates "Best Choice" seafood that is not only good for the environment, but better for people due to low levels of contaminants and high levels of omega-3 fatty acids. Naturally, fresh water-raised SweetSpring and wild-caught Alaska are the only salmon listed as Super Green. No other salmon is considered sustainable by Seafood Watch. Wild-caught Washington salmon is classified as a "Good Alternative."

Outdoor Growing Tank at SweetSpring Meadows

In 2010, while covering the Winter Olympic Games, in Vancouver, B.C., NBC Nightly News Anchor, Brian Williams, heard of the SweetSpring operation. The result was a spot on NBC Nightly News, with Tom Brokaw, where Per Heggelund was interviewed.

As more and more people in the seafood world learn about SweetSpring, the kudos continue to mount up. Following are just a few of the articles about, and awards to, SweetSpring Salmon in 2010.

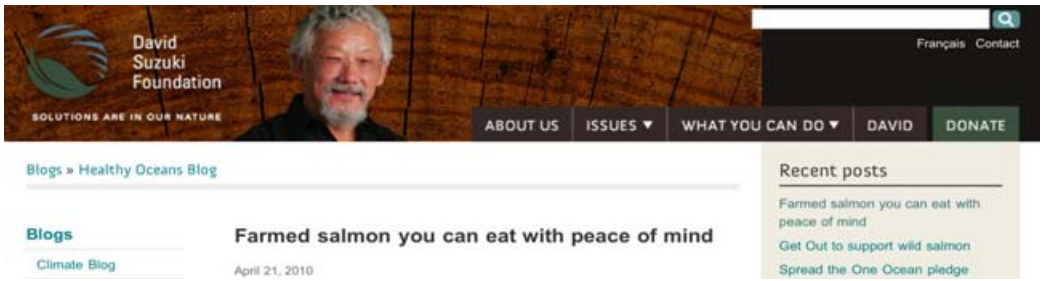
SCIENTIFIC AMERICAN™

Permanent Address: http://www.scientificamerican.com/article.cfm?id=coho-salmon-farming

Sea Change: Environmental Group Gives First-Time Nod to Sustainable Salmon-Farming Method

An aquaculture company devises a new, sustainable process that raises Pacific coho salmon in freshwater

By Clare Leschin-Hoar | Thursday, January 14, 2010 | 24 comments



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April 21, 2010

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Innovation and environmental responsibility in aquaculture

AquaSeed founder Per Heggelund takes a new approach to aquaculture

John Erik Stacy, Norwegian American Weekly, June 4, 2010

AquaSeed, the company that produces coho salmon in fresh-water tanks, has received several awards for environmental responsibility. On May 11, the company was bestowed an Environmental Excellence award from the Association of Washington Businesses. Also this year, SweetSpring salmon was included on the "Super Green" list of the Monterey Bay Aquarium's Seafood Watch program. This is because the "closed system" methods used by AquaSeed deserve the highest marks awarded by the Watch, as they explain: "Thanks to these innovations, U.S. farmed freshwater coho salmon is a 'Best Choice,' while traditional farmed salmon is ranked as 'Avoid.'" The salmon also contain high levels of omega-3 fatty acids. So the fish are good for human health and do not harm the ocean.

Per Heggelund, President of AquaSeed (photo John Erik Stacy).

Per Heggelund, Founder and President of AquaSeed, says that SweetSpring salmon taste like wild caught coho but "perhaps somewhat more delicate." Currently SweetSpring salmon has been made available to buyers in Vancouver, BC and on the Microsoft Commons in Redmond WA. AquaSeed produces about 100 tons of SweetSpring salmon per year. This may sound like a lot, yet it is a tiny fraction of the world's $10 billion worth of salmon farmed each year.

The parade continued throughout 2011.

Green Salmon

DANIEL C. BRUNELL

AquaSeed is revolutionizing the way salmon are bred for commercial use. After years of research, the company devised a way to grow and raise coho salmon in a freshwater farm environment. The breakthrough has caught the attention of the Monterey Bay Aquarium, which made AquaSeed's SweetSpring-labeled salmon the first farmed product to earn their Super Green ranking.

As increasing publicity and awards provided greater exposure, seafood wholesalers and retailers also began to take notice. It is now clear that the potential demand for SweetSpring Salmon vastly exceeds the Company's current production capacity. Within a year, approximately 1.2 million pounds of SweetSpring Salmon will be available to the market. Every ounce of that production, and much more, is already spoken for. One of the many advantages of SweetSpring Salmon is that production facilities can be located anywhere where suitable land and water are available.

That means that, in the future, fresh Coho Salmon can be available nationally, within three to four hours of every major consumer market in North America. The only drawback, however, is that production facilities need to be built and operated before annual crops of salmon can be produced. It is, in fact, a nice problem to have but still one that needs to be addressed.

Although the initial capital requirements are significant, the economics of building additional production facilities are extremely attractive. Once permits and regulatory authority approvals have been secured, only a two-year lead time is needed to construct facilities and produce initial harvests. With production facilities located close to major markets, transportation costs are reduced. Significant use of automated systems makes labor cost much more attractive than for traditional sea-farming operations. Once a facility is operating and producing routine harvests, the returns on investment can be substantial. Depending on a production facility's size (annual production volume), the initial investment can be recovered in just a few years.

Perhaps one of the greatest votes of confidence in SweetSpring's future is that the Gordon and Betty Moore Foundation recently awarded another $650,000 grant, for a total award of $1.6 Million during the last year. Gordon Moore, an avid fisherman, was a founder and long-time Chairman of Intel Corporation. It was Gordon who coined "Moore's Law" for the computer technology industry. Gordon

postulated that the power of computing would double every 18 months, while the cost would, at the same time be halved.

IntraFish

Land-based salmon farm nabs $975,000 grant

IntraFish Media

Published - February 02, 2011 - 14:00 GMT

SweetSpring Salmon, a leading land-based freshwater farmed salmon company and recipient of the Monterey Bay Aquarium's Super Green rating, on Tuesday said it was awarded a $975,000 grant by The Gordon and Betty Moore Foundation.

The grant will enable SweetSpring Salmon to improve the company's recirculating aquaculture system and more than double its current freshwater salmon production capacity.

The Gordon and Betty Moore Foundation, established in 2000, is committed to wild salmon protection. Its grant to SweetSpring Salmon is intended to help the company demonstrate the commercial feasibility of land-based freshwater Pacific salmon production.

It is, of course, extremely unusual for a profit-making business to be awarded a grant from a not-for-profit foundation. Nevertheless, the Moore Foundation thought that helping to fund SweetSpring's development was important for the future protection of wild salmon stocks.

From the groundwork built over the past 40 years, SweetSpring has proven that, with careful selective breeding over many generations, Pacific Coho can be raised exclusively in land-based, fresh water tank systems. One of the greatest advantages enjoyed by SweetSpring is that the most difficult part of the whole process, developing a superior line of pedigree brood stock. This pedigree breed of Coho provides the company with a unique intellectual property (IP) and complete traceability of all its products from “Egg to Plate”. At present, SweetSpring has the capacity to produce more than 18 million fertilized eggs per year from its Rochester hatchery operation. Based on this production capacity of Coho eggs, the company is able to support production of 11.2 million harvestable adult fish, at 74 Million lbs, live weight by building 34 units of 2.2 Million lb production units, around the country. Egg production can easily be ramped up by a factor of five, over three to four years.

Now, the challenge is growing the production capacity to meet the tremendous market demand that is already evident. SweetSpring is receiving enquiries from potential commercial customers and seafood distributors on an almost daily basis. Once people sample SweetSpring Salmon, they want to be able to buy it.

III. Looking to the Future

As of year-end 2012, the current total annual production capacity for SweetSpring Salmon will be approximately 1.15 Million pounds of live-weight salmon. That translates to one million pounds of head-on gutted fish, ready for market. The current live-weight capacity includes 600,000 pounds grown under contract by two Hutterite Colonies, in Montana, at facilities owned by the Colonies. These facilities are based on the technology pioneered by SweetSpring at its Rochester location. The Colonies depend on SweetSpring to provide the eggs from which they grow their own harvests, and ongoing quality assurance services. SweetSpring also licences the pedigree to those organizations.

New Hutterite 300k lbs. Production Facility - Montana

Partnering with contract growers is a common model in many types of food production and one of the options that SweetSpring makes available to entities that have land, water, and construction capabilities, as well as their own construction and working capital resources. The production facility shown in the above photo will produce 300,000 lbs of live weight SweetSpring Coho, each year.

U.S. Salmon Consumption

The University of Alaska, Anchorage, published data on salmon consumption in the U.S., from 2000 through 2004. Their report cited the following "*Key Points*".

During the years 2000-2004, Americans consumed an average of about 284,000 metric tons (625 million lbs.) of salmon annually, of which approximately:

- one-third was Pacific salmon and two-thirds was Atlantic salmon;
- one-third was wild and two-thirds was farmed;
- one-third was domestic production and two thirds was imported;
- three-fifths was fresh salmon, one-fifth was frozen salmon; and
- one-fifth was canned salmon.

There were significant differences in U.S. consumption of Pacific salmon (which is mostly wild) and Atlantic salmon (which is mostly farmed).

- 45% of Pacific salmon was canned while almost no Atlantic salmon was canned;
- 34% of Pacific salmon was frozen while only 13% of Atlantic salmon was frozen; and
- 21% of Pacific salmon was fresh while 87% of Atlantic salmon was fresh.

Total U.S. salmon consumption increased dramatically from about 130,000 metric tons in 1989 to more than 300,000 metric tons in 2004, mostly due to rapid growth in consumption of imported farmed salmon. Between 2000 and 2004, about 78 percent of fresh and frozen salmon consumption in the United States was imported farmed salmon.

Between 2000 and 2004, about 16 percent of total salmon consumption in the United States was canned salmon. Since 2001, salmon (including canned salmon) has ranked third among fish species consumed in the United States, after shrimp and canned tuna, and accounted for about 14 percent of U.S. fish consumption. Fish represented less than 8 percent of total U.S. consumption of meat, poultry and fish in 2001, while salmon represented just 1 percent.

SweetSpring Salmon is almost exclusively fresh. Almost none is frozen, none is canned and a very small quantity is converted to cured or smoked product. Therefore, for comparison purposes and in order to understand its place in the market, we consider only fresh, wild Pacific salmon. The estimated total annual consumption of fresh, wild Pacific salmon in 2012 is 53,000 Metric Tons (117 Million lbs.). Fresh SweetSpring Salmon is priced between fresh farmed Atlantic salmon and most fresh wild Pacific salmon. Accordingly, our research indicates that both retailers and consumers will be willing to pay a premium for a demonstrably better product.

Based on these and other factors, we believe that, if the capacity was currently available, the immediate market demand would conservatively support the sale of at least 10,000 Metric Tonnes of live-weight SweetSpring Fresh Water Coho, annually. That represents approximately 10% of the fresh, wild salmon market in the United States. Actual future annual consumption of SweetSpring Coho will depend on several factors:

- ☐ the extent to which North American sea-farmed salmon production may be curtailed or even reduced due to a combination of regulatory restriction and consumer preferences;
- ☐ how much increasing regulatory restrictions impact the importation of sea-pen farmed salmon from abroad;
- ☐ the future rates of change in per-capita consumption, combined with increasing consumer populations; and
- ☐ declining Pacific salmon harvests due to future listings of wild stocks as endangered in accordance with the Endanger Species Act.

If our estimate that current demand would support production, in 2012, of 10,000 MT of live-weight SweetSpring Coho, a conservative projection of just a 20% annual increase in demand would, by 2017, support production of 16,000 MT, and 21,000 MT, by 2020. We believe that these are appropriately conservative estimates, given the total U.S. Salmon market and the marketable advantages enjoyed by the product.

At present, SweetSpring and its contract growers are the only U.S. producers of Fresh Water Coho. Given the number of years and generations required to develop salmon species that can live out their lives in fresh water, we estimate that it will be at least 10, and probably more, years before any direct competitors are likely to impact SweetSpring's market.

A. Options for Growth

The principal options for growing SweetSpring production capacity to the level we believe the market will support are:

- ☑ organic growth financed through additional capital investment in SweetSpring Salmon, Inc.;
- ☑ partnering with individuals or entities that already own land, with rights to required volumes of clean, suitable water, with investment in building production facilities and initially supporting ongoing operations by third party investors and/or lenders (Land & Water Partners);
- ☑ partnering with individuals or entities that already own land, with rights to required volumes of clean, suitable water, who will also finance building and initial operation of production facilities (Land, Water & Investor Partners); and/or

- ☑ securing, by lease or purchase, land, with rights to required volumes of clean, suitable water, and securing investors/lenders on a facility-by-facility basis.

Organic growth by SweetSpring, alone, at the rate the market would support, would require significant near-term capital, in the range of $30 to $50 Million, over the next three years. Accordingly, we believe that the best options for growing the significant majority of near-term capacity lie in various kinds of partnership arrangements for building and operating new production facilities.

B. New Production Facilities

An individual production facility can produce as little as 150,000 lbs of live-weight Coho or as much as 1,000 Metric Tonnes (2.2 Million Lbs.) There are some meaningful economies of scale with larger facilities. The principal advantages of building and operating larger facilities include the following.

- ☑ Engineering costs for a 2.2 Million pound facility are approximately two times that for a 150,000 pound facility.
- ☑ Power consumption for a 2.2 Million pound facility is approximately nine times greater than for a 150,000 pound facility, for a cost advantage of approximately 25%.
- ☑ A 2.2 Million pound facility produces enough effluent to make sale of the derived, nitrogen-rich fertilizer practical and economically advantageous.
- ☑ Labor costs for operating a 400,000 pound facility are approximately 26% of all operating expenses. Labor costs for operating a 2.2 Million pound facility are approximately 16%. That translates to a $0.30 per pound and a total of $510,000 net profit advantage for the larger production facility.

Regardless of relative economies of scale, the size of any new production facility should be predicated on the size of the geographic and population market it will be expected to serve. Ideally, any production facility will serve a geographic market that is within a 300 to 350 mile radius of the facility. In most instances, those distances equate to a six-to-seven hour transportation timeline from production facility to market. That allows for same or next day delivery of harvested fish to retail outlets, institutional customers, restaurants and hotels, by refrigerated trucks. In fact, with modern transportation options and refrigeration technology, fresh fish can be distributed anywhere in the country from facilities as far as 2,500 miles away. Closer production is, of course, desirable and reduces the total cost of the product or, conversely, the net revenue, at the wholesale level.

Without regard to the particular option for facility ownership and investment that is selected, the process of developing and building a new facility requires a number of steps. It begins with analyzing a particular geographic market, and securing suitable land, with rights to a consistent, year-round supply of the required quality and quantity of water. The site requirements, other than water quality and quantity, are essentially the same, regardless of the planned production volume.

Although larger facilities have a larger footprint, a site of two acres, with proper road access, will accommodate any size production facility, up to 1,000 MT per year. It may be that even larger units will prove to be equally effective but, at least based on experience to date, the 1,000 MT size appears likely to be optimal.

Once the desired site is identified, the next steps required from starting construction to a first harvest of fresh Coho Salmon include the following.

- ☑ **Market Analysis.** This step is necessary to determine the ideal volume of production for a particular geography. The data required to support such analysis includes population and seafood consumption data, distribution and processing resources, and retail potential. Per capita seafood consumption is highest closest to the sea or large bodies of water. People who live in North Dakota eat less seafood than people in Maryland, or Florida.

- ☑ **Initial site evaluation and feasibility study.** Once facility volume is determined and a proposed site is identified, that site must be evaluated. Water quality must be tested and consistency of supply must be verified. This step usually involves an elapsed time of approximately three weeks.

- ☑ **Permitting.** This is the most variable step, in terms of timing. It also involves several elements and will overlap other steps, including Site Evaluation and Engineering. Different local jurisdictions will be either very helpful in the permitting process, simply 'by-the-book', or very difficult. Although three to four months should usually suffice, we suggest that one should assume an elapsed time of six months to secure necessary permits and regulatory approvals. Some States have very restrictive laws and regulations regarding water usage, and health and safety requirements.

- ☑ **Engineering.** That process normally takes approximately four to six weeks. The study will include provision of drawings suitable for securing construction bids from suitable construction firms. It will also specify the method for obtaining the necessary water supply and getting it to the facility. That will factor into the costs of construction. If the aquifer is deeper in the ground, it will cost more to drill the wells. If it lies beneath harder sub-strata, such as shale or rock, that will also be a consideration, for both time and cost.

- ☑ **Securing Construction Resources.** Based on bids and negotiations, a construction contract will be drawn and executed by the parties. The contract will be quite detailed and will contain specifications of all of the facility components and equipment that will be included. At this point, it is also necessary to have final, detailed plans. This process should be completed within a six to eight week period.

- ☑ **Construction.** The construction phase should be completed within four months but we suggest that five be allowed, in case of unforeseen issues, with weather, regulatory inspections and the like. During the construction

phase, there must be project management and oversight by a representative of the facility owner. During that time, operations staff for the facility must be trained. This involves on-site classroom and hands-on training at SweetSpring's Rochester facility.

- ☑ **Facility Testing.** Once construction is complete, all equipment and systems must be tested. Tanks must be filled, Biofilter tests must be conducted. Final, pre-operational water quality samples must be taken. This testing phase is essentially a 'dry-run' of the entire facility, without any fish. In construction terms, think of this as a 'punch-list' process on steroids.

- ☑ **Go-live Operations.** The first eyed eggs are placed in the egg tanks and the ongoing operation begins. For a first harvest that begins with eyed eggs, we expect a total of 14 months elapsed time until the fish achieve a 3kg weight and are ready to bring to market.

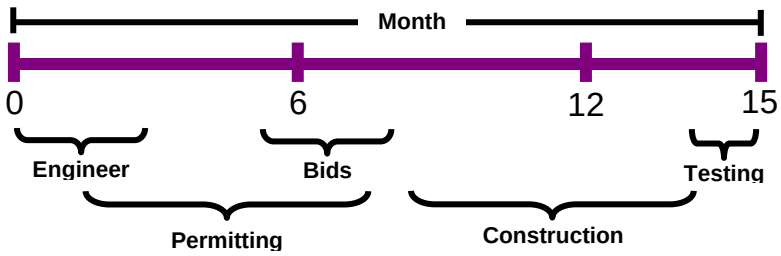
New 400k lbs. Recirculation Facility at Rochester

The figure at the top of the next page provides timelines for both facility development and ongoing operations.

Timeframes: Start to First Harvest

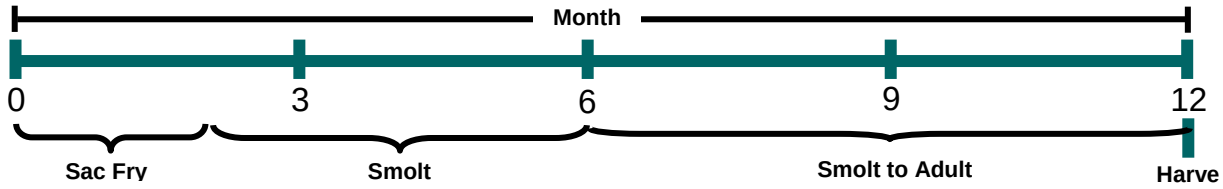
Market Analysis and Site Selection - 6 to 8

Building Phase:



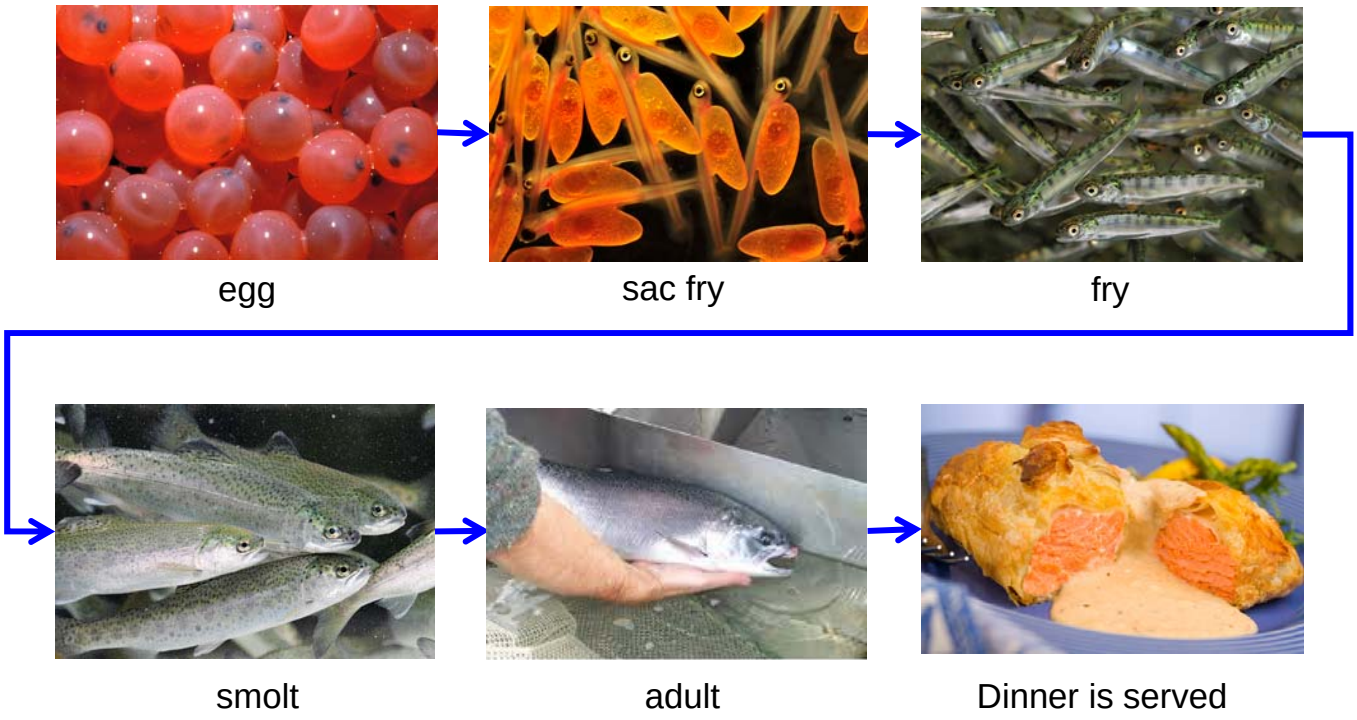
New Rochester Facility

Growing Phase:



Once the first growing phase of the new facility project begins, the stages of growth must be managed carefully to assure the most successful harvests. As the next pictures show, the fish go through very distinct changes as they progress from eggs to harvestable adults. The pictures on the next page show the life cycle from eyed eggs to food.

Coho Life Cycle - Egg to Harvest



As the newly hatched 'fry' are transferred to the first grow-out tanks, they develop into 'smolts', which now begin to take on more of the appearance of their adult form.

1. Facility Design

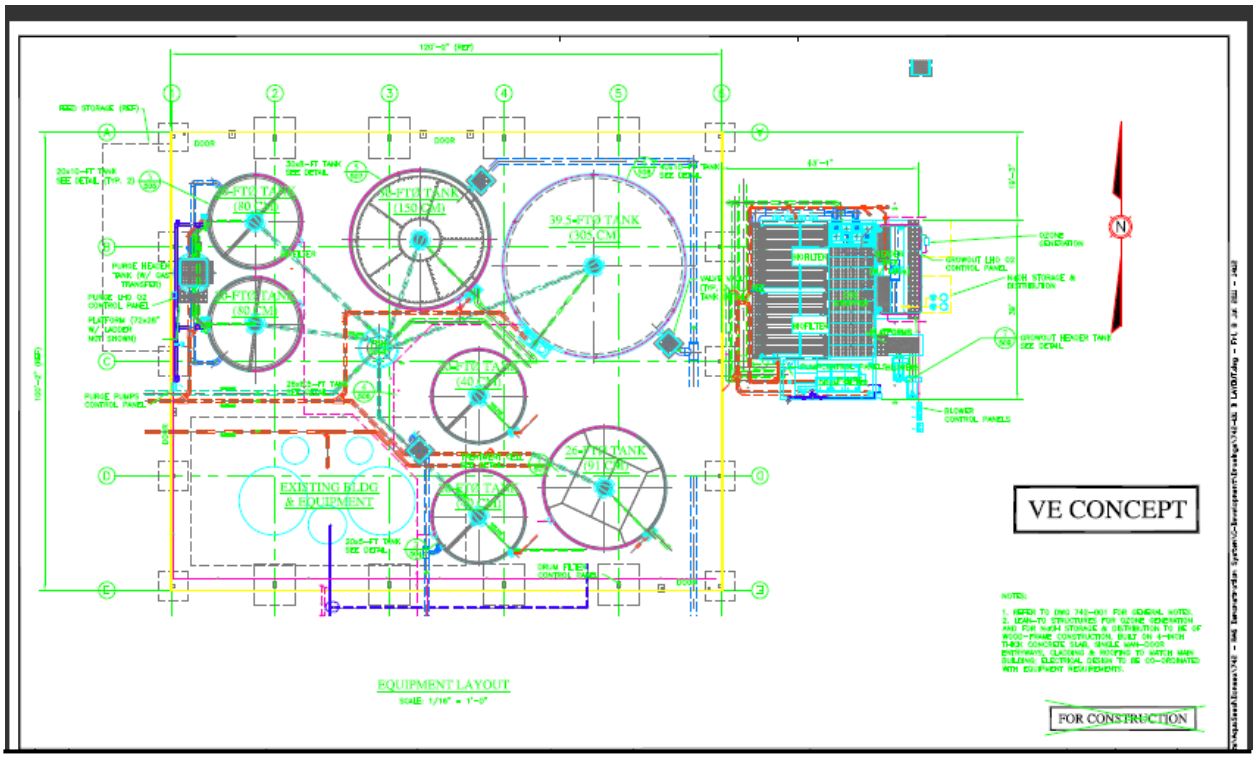
The design of a facility will vary based on climate, site topography and intended production volume. If the climate is temperate, buildings and water may require less heating or cooling than in locales where weather is more extreme. In warmer climates, more use of air conditioning and cooling will be needed. In colder climates, more heating will be required. If the site is reasonably flat, the design will be based solely on the intended production volume. If the site is on a slope or grade, terracing may be desirable.

As newer facilities are designed and built in different geographic locales, new lessons are invariably learned. Grow-out tanks for smolts and larger fish may be [almost] entirely on top of the ground or partially imbedded in the ground. Decisions on tank depth and degree of underground construction will vary based on climate and ground material.

We are now at the point in SweetSpring's evolution that we believe we can make sound-judgment decisions about facility design, based on our experiences to date. We also now know more about construction materials and equipment resources. Some materials that might be ideal in a temperate

climate will not be recommended in locales where winter temperatures are very low or summer temperatures are very high.

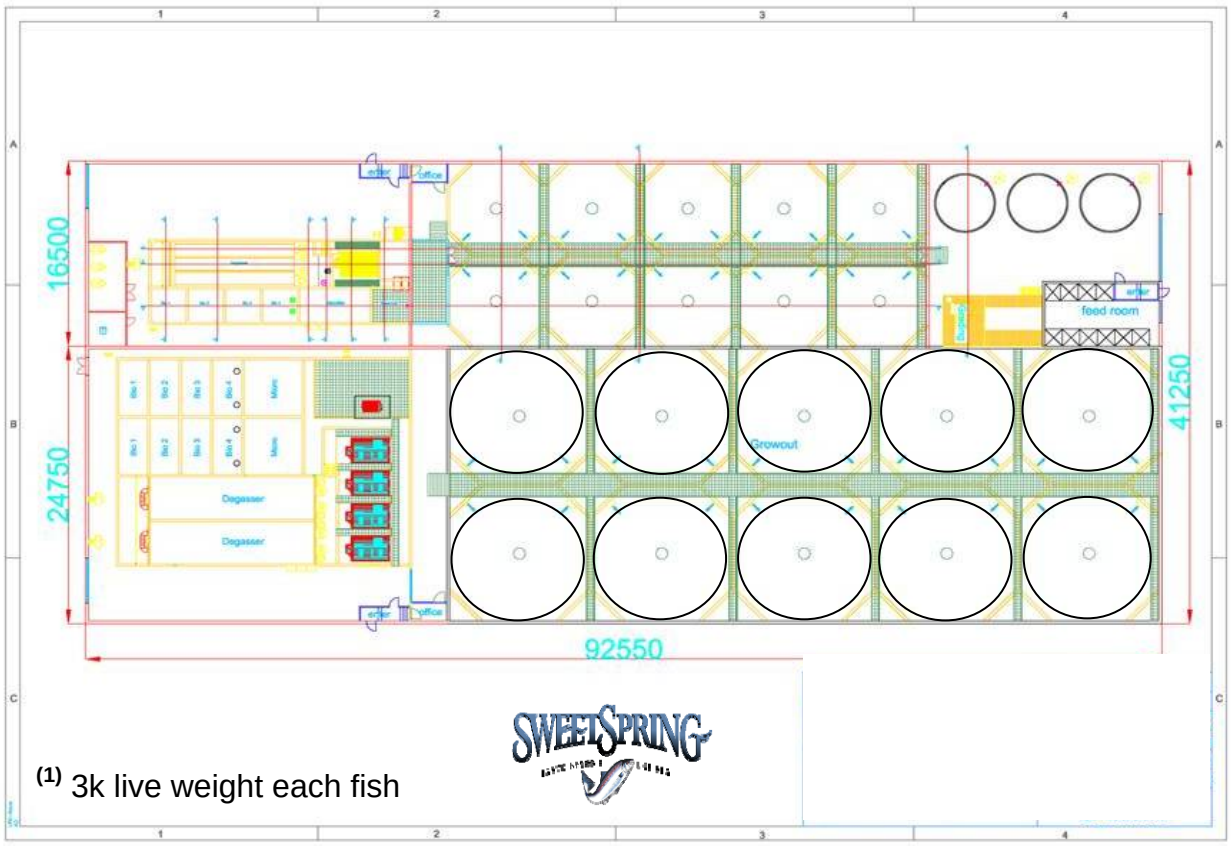
Ideally, most of each production facility, regardless of climate or production volume will be located indoors rather than outside. With indoor facilities, growing environments are much easier and more economical to control. Initial building costs are higher but ongoing operating costs are lower and production yields are greater, to an extent that the additional initial expenses can be recovered fairly quickly. The following drawing shows the actual design of the second, 400k lb production facility at Rochester.



One can see the different sizes of tanks. The smallest tanks are where eyed eggs begin the cycle of growing toward harvestable fish. Tanks are not only different in circumference, as shown in the drawing, but also different in depth. That allows significantly different water volumes and tank populations for different sized fish.

The drawing on the following page shows the design of a proposed 1,000 MT (2.2 Million lb) new production facility, to be located on land that is essentially flat, with normal, non-rocky subsoil layers.

1,000 Metric Tonne Production Facility



(1) 3k live weight each fish

As one can see, this design is quite different from the new Rochester 400k lb facility. It will produce 5½ times as much fish as the new Rochester unit. The new Rochester unit will share portions of its new equipment with the older (150k lb) facility. The new facility requires a different design and has a new, more efficient recirculation and purification tower.

The current production facilities range from the original Rochester 150k lb unit to the two 300k lb units in Montana and the new 400k lb unit at Rochester. The actual size of a given production facility can be any size, up to 1,000 Metric Tonnes. We believe that size is optimal from a construction and operating cost perspective, assuming the particular geographic market can support that size facility. For purposes of this document, however, we will focus on facilities ranging from 200k lbs to 2.2 Million lbs.

A final point regarding size is that, even if a particular geographic market is assumed to support the 2.2 Million lb facility, a landowner and/or investor may still wish to begin with a smaller facility and, perhaps, build subsequent units on adjoining land, once profitability is achieved and cash-flows support building additional units.

C. Market Considerations

We frequently hear that “a particular product is so wonderful that it practically sells itself”. In fact, no product, no matter how amazing ever actually sells itself. Like any other new product, SweetSpring Coho must be sold. That involves a combination of marketing, public relations and direct sales effort and, without the latter, the former two will make no difference.

As you can readily see from the earlier discussion regarding publicity and recognition, SweetSpring has done a very good job with the first two. The third component, direct sales, is well underway. Sales of SweetSpring Coho, in any geographic market will depend on:

1. consistent availability;
2. product quality;
3. local and regional marketing; and
4. consumer acceptance.

Perception is everything. ‘Farmed’ salmon has received such adverse press that some consumers refuse to consider anything but ‘wild’ Pacific salmon. Obviously, many other consumers either don’t know the differences or don’t care. Farmed Atlantic salmon represents 67% of all the salmon consumed in this country and it is priced at anywhere from 30% to 70% of fresh wild salmon.

The ideal retailer or restaurant to sell SweetSpring Coho will be dedicated to sustainable seafood, willing to invest in customer education, and committed for the longer term. Happily, many higher-end food retailers and restaurants value and trust the Monterey Bay Aquarium’s assessment of seafood.

From a market standpoint, SweetSpring Coho offers several advantages, including:

- ☑ year-around availability;
- ☑ priced between farmed Atlantic and most wild;
- ☑ quality and flavor comparable to wild; and
- ☑ higher concentrations of Omega-3 oils than most wild and all sea-farmed salmon.

In the winter, when no fresh wild Pacific salmon is available, SweetSpring is harvesting fresh water Coho. The SweetSpring Coho price, at any wholesale or retail level is approximately 20% to 25% higher than fresh farmed Atlantic and 20% to 25% lower than local fresh wild Sockeye. The SweetSpring Coho price, compared to local Chinook or King salmon, in season, is 30% to 40% less.

IV. Economics

The economics of SweetSpring Salmon production involve:

1. the initial investment of building a new Production Facility and supporting its initial operation until it realizes sufficient cash-flow from sales of harvestable fish to cover current operating costs; and
2. operating costs for an up-and-running production facility, producing harvestable fish on a routine basis.

A. Building New Production Facilities

Initial Building Costs

The cost of building a new production facility depends on all of the factors detailed in the preceding section, under the heading, 'Facilities Design'. In order to provide a more simplified understanding of the relationship between Production Facility volume and building cost, we will begin by assuming that:

1. land use and adequate water rights have already been secured from a land owner who will be a Production Partner;
2. all necessary building permits and regulatory approvals have been secured;
3. the land is flat or has been graded to be flat;
4. after engineering and design, construction contracts have been negotiated and executed; and
5. regardless of production volume or size, the facilities will be built at a site having the characteristics of the current Rochester site, where the climate is relatively temperate.

New Rochester Brood Stock Buildings

The following table shows high-level costs for building different sized facilities, utilizing the assumptions detailed above.

Initial Capital Requirements and Building Costs
Production Facilities of Different Sizes (Live Weight Lbs. 000)
All $ Amounts in Thousands

Volume:	**200**	**400**	**600**	**800**	**1,000**	**2,200**
Construction	544	1,007	1,398	1,726	1,998	4,070
Equipment	548	1,014	1,409	1,739	2,013	4,100
Installation	243	450	625	772	894	1,820
Project Mgt	12	22	31	38	44	90
Staff Training	48	48	48	48	48	48
Facility Testing	12	12	12	12	14	29
Contingency	109	202	281	347	402	818
Totals	**$ 1,464**	**$ 2,711**	**$ 3,765**	**$ 4,648**	**$ 5,380**	**$ 10,959**
Volume %	9.1%	18.2%	27.3%	36.4%	45.5%	100.0%
Cost Percent	13.4%	24.7%	34.4%	42.4%	49.1%	100.0%

As the table shows, the ratio of development/building cost to volume decreases as volume increases. For a 200,000 lb facility, building cost equals approximately $7.32 per lb of expected annual gross volume, while for the 2.2 Million lb facility, the cost per lb is approximately $4.98.

Financing

As discussed earlier, the costs outlined above, plus initial working capital to operate a facility until it begins generating revenues that are sufficient to cover ongoing operating expenses and debt service. For these purposes, we assume that for construction, a long-term (20-year) loan for 75% of the building cost will be secured at current, favorable rates. Based on that, annual debt service for the different sized facilities would be as shown in the following table.

Live Wt:	**200**	**400**	**600**	**800**	**1,000**	**2,200**
Annual Pmt:	**$ 88,100**	**$ 163,100**	**$ 226,600**	**$ 279,700**	**$ 323,800**	**$ 659,500**

Additional capital requirements include the 25% of building costs not covered by the long-term loan and working capital to operate the facility, until the first harvest begins to generate revenue sufficient to cover operating ongoing expenses.

B. Operating Financial Data

The next table provides details of ongoing annual operating costs. Required initial working capital is approximately equal to one year's ongoing operating expense. Some costs, such as harvest expenses, are not needed for initial working capital but other first year costs offset those amounts.

Annual Operating Expense
Production Facilities of Different Sizes (Live Weight lbs. 000)
All $ Amounts in Thousands

	200	400	600	800	1,000	2,200
Eyed Eggs	$ 10	$ 20	$ 30	$ 40	$ 50	$ 111
Labor	132	138	197	265	278	331
Feed	207	413	620	826	1,033	2,272
Utilities	52	103	155	207	259	569
LT Loan Pmts	88	163	227	280	286	583
Investor Pmt[(1)]	151	227	285	363	429	841
Other Expenses	111	184	249	308	365	691
Total w/o Depr'n	$ 930	$ 1,469	$ 2,022	$ 2,586	$ 3,082	$ 5,933
Depreciation	67	124	173	213	247	503
Net Op Ex	$ 998	$ 1,594	$ 2,194	$ 2,799	$ 3,329	$ 6,436

(1) Assumes investor financing of working capital amortized over 15 years at 10% interest.

Of course, ongoing operating costs are, by far, the most significant expense for a facility that will be expected to operate for 25 years or more.

Investors in a production facility may be either equity investors or lenders. An equity investor owns a share of the production facility entity, usually a Limited Liability Company ('LLC'). A lender has no equity in the facility entity but receives a premium return for advancing initial capital for the facility.

In a single production facility, there will be multiple participants, including:

- SweetSpring Salmon, Inc., as Development Project Manager, Facility Operator, Marketing Entity, Product Distributor, Egg Supplier; and Brand Licensor;
- a Land Owner, who also owns the needed water rights;
- a long-term lender, such as a bank or other financial institution, or perhaps, a governmental entity, and government agency guarantees may also play a part in long-term financing;
- an investor or investors who may be either equity participants or simply lenders; and
- a promoter or developer who identifies land, water and investor partners; may secure long-term financing; and may be involved in the initial project to build a production facility.

Profit & Loss Overview

We now have all of the elements that make up a standard Profit & Loss Account. The following table shows P&L summaries for our differing production facility volumes.

Pro-forma Profit & Loss
Production Facilities of Different Sizes (Live Weight Lbs. 000)
All $ Amounts in Thousands

	200	400	600	800	1,000	2,200
Gross Op Revenues	$ 1,029	$ 2,058	$ 3,087	$ 4,115	$ 5,144	$ 11,317
Cost of Goods	567	877	1,241	1,612	1,938	3,697
LT Debt Service	88	163	227	280	286	583
Gross Profit	374	1,017	1,619	2,223	2,883	6,960
Operating Expenses	209	351	499	641	781	1,606
Net Operating Profit	164	667	1,120	1,583	2,102	5,354
% of Revenues	15.9%	32.4%	36.3%	38.5%	40.9%	47.3%

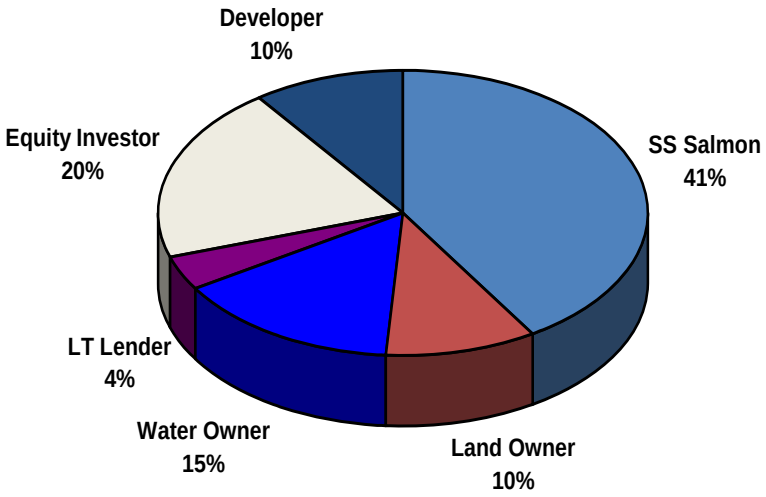
All revenue numbers based on per lb price of $6.80 for 100% head-on gutted sales. All numbers are estimates, based on experience to date, and are subject to change or adjustment.

C. Equity & Distributions

The allocation of equity in a given production facility entity depends on several factors. These are based primarily on relative values and contributions. Most

production facilities will be located in rural areas but land and water values differ considerably in different parts of the country. In some cases, owners of land and water rights for that land may be two or more persons or entities. One or more equity investors providing for initial capital requirements will be entitled to an equity share representative of the relative value of the capital invested. A long-term lender may or may not take any equity position. A Developer/Promoter will almost always take an equity share. The following chart illustrates a project where all parties are equity participants.

Equity Allocation, with Equity Capital Investor(s) and a Developer/Promoter

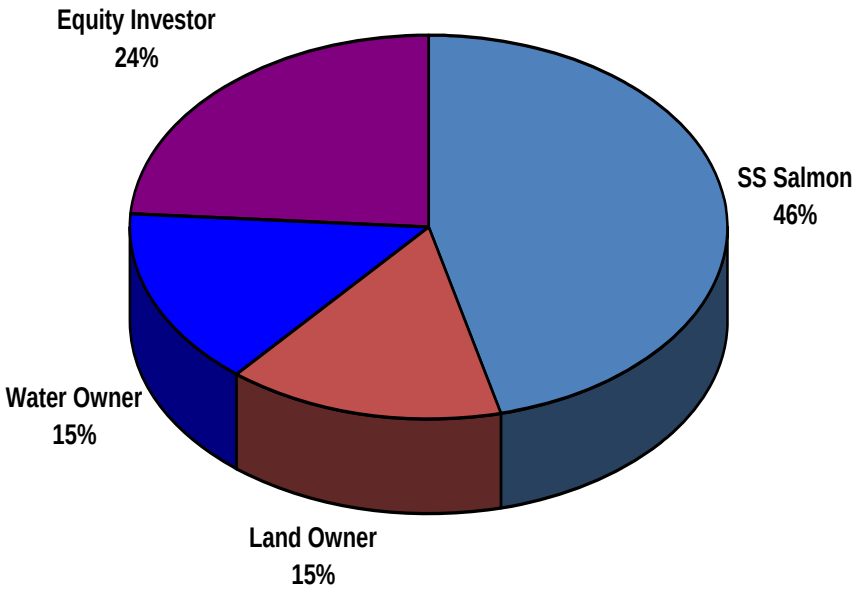


In the above example, we are assuming that there is a Developer/Promoter and that the long-term lender takes a small (4%) equity position. Note that the land and water owner may also be an equity investor or lender. Just to complicate matters, a single project may have both equity investors and lender investors.

Elite Brood Stock Small Start Tank

In the next example, we will assume that the Land & Water Owner is also the only equity investor, providing all of the initial capital required, except the long-term construction financing. In this example, there is no Developer/Promoter and the long-term lender is not an equity participant.

Equity Allocation, with Equity Capital Investor(s) and no Developer/Promoter

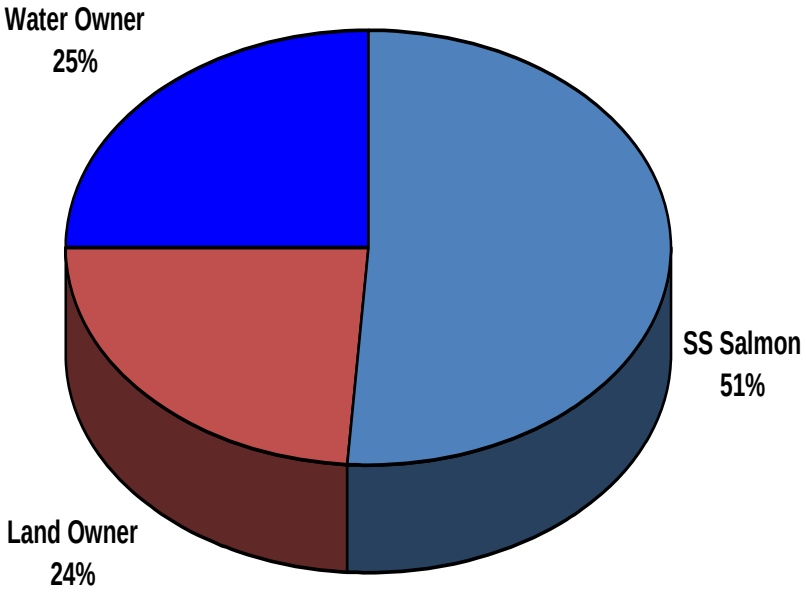


In the above example the Land Owner, Equity Investor and SweetSpring share approximately equally in the shares no longer taken by the Developer/Promoter and the Long-term Lender.

20g Fingerling

In our last example, we assume that the person(s) or entity providing initial capital requirements is acting as a lender and not as an equity participant, and carry on from the previous example.

Equity Allocation, with Lender Investor(s) and no Developer/Promoter



In this last example, there are only three equity participants.

Profit Distributions

In general, profits are allocated approximately in proportion to equity, after setting aside a portion of profits for reserves and ongoing working capital needs. We will use the second example as our basis for illustrating a typical annual distribution of profits, as shown in the following table, assuming a hypothetical net pre-tax operating profit of $5.2 Million, after all expenses and debt service.

	Equity %	Reserve %	Distrib' %	Distrib' $
Land Owner	15%	4%	11%	$ 572,000
Water Owner	15%	4%	11%	$ 572,000
Equity Investor	24%	4%	20%	$ 1,040,000
SS Salmon, Inc.	46%	16%	30%	$ 1,560,000
Totals	100%	28%	72%	$ 3,744,000

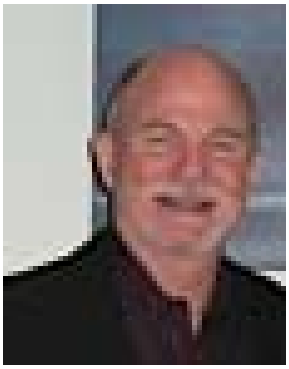
The objective is to build up, over time, an operating reserve equal to approximately six months operating revenue, in order to assure ongoing financial solvency. It is also important to recognize that these figures, including allocations of equity and distributable income are hypothetical and provided only as illustrations. Each production facility may be somewhat unique and, therefore, financial interests and circumstances will vary accordingly.

Appendix A
Leadership & Management

SweetSpring has a particularly strong leadership group. Our management team consists of senior professionals, with significant depth of experience in the seafood and food production world. Members of the Board and Executive Team bring depth of experience that is extremely important to the Company.

Board of Directors and Senior Management

William Lockwood , Chairman



Bill Lockwood is a private investor who spent his business career in the management of private post-secondary educational institutions. Most recently, Bill served as President of Platt Colleges, a three campus private college, located in the greater Los Angeles area, from 1986-2003. Prior to that assignment, he served as General Manager of Sawyer College, in Pasadena, California. Bill's educational background is in business management and philosophy. Bill lives in La Canada, California, with his wife, Gail, and freely admits that he has an uncurable addiction to golf. Bill brings a wealth of experience to SweetSpring, joined the Company's Board of Directors, in 2010, and now serves as Chairman.

Phillip David, PhD, Chief Executive

Phillip David is a Geneticist and holds a Doctoral Degree in Genetic Statistics. Over a 35-year career, he has devoted his energies to food science and developed a number of leading edge methodologies for improving the genetic characteristics of a number of species of animals grown for food. These include pigs, turkeys and wombats. Previously, Phil was Chief Executive of Sygen International, plc, the global leader in applying biotechnology and mathematical genetics to the genetic improvement of farm animals with sales of $250m and employing 1500 people in 31 countries. Phillip joined SweetSpring in 2009 as a consultant and was appointed Chief Executive, in 2011.

Per Heggelund, President and Founder

Per is the Founder of SweetSpring Salmon, Inc. and its predecessor, AquaSeed Corporation. Per acquired the SweetSpring brood stock pedigree from Campbell Soup Company, in 1991, and since that time has presided over the development of the Company and the refinement of the Fresh Water Coho breeding and growing program. A native of Norway, where he lived 200 miles above the Arctic Circle and had the good sense to move to the United States, for high school, where he was able to thaw out. Per holds a Masters Degree in Fisheries and Food Technology, as well as an MBA, both from the University of Washington, in Seattle.

Steve Brinn, Director

Steve is Owner and principal of Luna Creek Partners, LLC a strategic and capital advisory company. Previously, Steve served as CEO of LumenIQ, Inc., a biometric imaging software company. From 1992 until 2001, Steve was Chief Operating Officer of Trillium Corporation, privately-held real estate and resource investment company. For 12 years, he was Managing Partner of a leading Northwest Washington law firm, specializing in commercial and business law issues. Steve holds a BA from Stanford University and a JD Degree from the Yale University School of Law.

Chris DePalma, Director

Chris DePalma has over 20 years experience in international business, specializing in new business development, project management and operational and technical support, with a focus on the Russian Far East and Asia. He has designed and spearheaded many projects in fisheries, shipping and logistics involving the modernization and optimization of catching and land-based and at-sea processing systems. He is fluent in Russian. Chris joined the Sweet Spring board in November 2011.

Dag Heggelund, Director

Dag Heggelund has over 25 years of experience in business development. He has started two software businesses that were sold to publicly traded oil service companies. He currently is CTO for TraceRegister LLC, a world leading traceability company for the seafood industry. Dag is a native of Norway's Arctic region where his family for generations derived their livelihood from the fishing industry. He immigrated to the US as a high school student and went on to acquire a PhD from Texas A&M University in Petroleum Engineering. Dag was an early investor in AquaSeed and he joined the SweetSpring board in 2010.

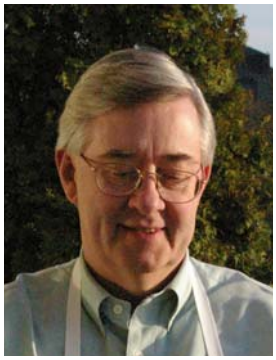
Keith Wheeler, Director

Keith has served in key management roles in environmental science. He holds undergraduate degrees in Biology and Chemistry from Syracuse University and graduate degrees in Environmental Science and Soil and Water Conservation from Cornell University. He is the author of numerous peer reviewed and popular publications, including a book titled *Education for Sustainability: a Paradigm for Hope*, published by Kluwer Academic. He has over 32 years of professional experience in the fields of sustainability, conservation, technology and the environment. Presently, he is Chairman and CEO of ZedX Inc., an international company that focuses on sustainable resource management.

John Adams III, CFO

John is the founder of, Delphis LLC, a consulting company for small to mid sized companies in the areas of strategic planning, financial/business planning, M&A and debt/equity financing. Previously, John was the CFO/EVP Finance at ServiceSource International, LLC, a private company that provides outsourcing sales and technical support to blue chip Hardware, Software and Healthcare companies, worldwide. Prior to that, John served as CFO/Group Finance Director at Sygen International. John holds an MBA in Finance & Marketing from the Anderson School of Management at UCLA, and a BA in Economics from Villanova University.

Brendan O'Farrell, EVP Development



Brendan O'Farrell is a Consulting Actuary with significant background in business development and financial management, as well as the food and hospitality industries. Previously, he was Chief Executive of HCM International, LLC, a global human resources and financial management consulting firm. He has authored or co-authored papers and texts on subjects ranging from performance management to stochastic mathematics, service quality, legislation and employee compensation. Brendan became first became involved with SweetSpring in 2009, as a consultant, introducing chefs, and restaurants, and potential production partners across the USA to SweetSpring Freshwater Coho.

Greg Hudson, Vice President & Facilities Manager

A native of western Washington State, Greg Hudson has worked in the Salmon industry for 30 years. He has covered a wide range of operational management roles for Salmon conservation and production. Over the years, his assignments have included facility construction, genetic- breeding programs, egg production for worldwide sales, and budget and staffing responsibilities. Greg began his salmon career as Freshwater Manager of Domsea Farms Inc. a subsidiary of Campbell Soup Corporation. In his current role, as Vice President of SweetSpring Salmon Inc., he has been instrumental in the creation of SweetSpring Freshwater Coho and the adaption of water recirculation systems that produce them for market.

William Schroeder, Business Development

Bill Schroder is a Vietnam veteran, infantry officer, helicopter pilot, successful businessman, sailor, husband, father and author. He is the Managing Member of Northwest Capital Connection, LLC., an asset based commercial real estate financing enterprise. From 1984 through 1997, he was the Chief Executive of Centennial Homes, Inc. and its Sister company, Nevada General Development, Inc. In those roles, Bill oversaw the development and building of more than 2,000 commercial and residential properties, in Nevada. He brings to SweetSpring an in-depth knowledge of construction methods, as well as real property investment and financing.

Jim Terry, Technical Services Manager

Jim is responsible for all construction and maintenance at SweetSpring's existing and planned production facilities. A 35-year veteran of the US Air Force, he has had a life-long interest in wildlife management and conservation. Jim studied fisheries and wildlife management at the University of Minnesota and gained an additional specialty AAS degree in Fisheries Technology, at Bellingham Technical College. in 2006, he attended a specialist course at the Freshwater Institute, on recirculating aquaculture systems. Jim lent his expertise to designing and building a Tilapia hatchery and grow-out system for Bellingham Technical College.

Dustin Weise, Sales Manager

Dustin began as a fresh salmon buyer in Alaska, sourcing fish from all over the state and helped to create multiple fresh and frozen salmon programs to small community co-ops and some of the largest US wholesalers and retailers. From fish monger to finance manager, his executive role with Wildcatch Inc., a wild salmon marketing company founded by fishermen with close connections to sustainable seafood advocates, instilled a passion for the future health of salmon, as a species, and the industries impact on a global scale. Prior industry work includes research and development of new products through cost analysis, competitive analysis, and market research. Dustin holds a BA in Economics from Western Washington University.

Mark Dixon, Process & Harvest Manager

Born in Olean, New York, Mark moved to Rochester, Washington, as a teenager, and took advantage of all that the Northwest has to offer in the way of outdoor activities. As a young man, Mark had an opportunity to work in one of the first land-based aquaculture projects anywhere in the country. Over more than 25 years, he has seen the tremendous evolution in the industry and now is responsible for SweetSpring's harvesting operations and new developments, in Montana. He and his wife, Angela, have two adult children and, most recently, a first grandson.

Patricia (Patty) Munsell, Broodstock & Egg Production Manager

Patty has worked in the Washington State Salmon industry for 26 years. She has lived in Washington State most of her life with her family and enjoys its many outdoor recreation opportunities. Her career has covered all aspects of raising freshwater pacific salmon. She began with Domsea farms Inc., a subsidiary of the Campbell Soup, as a fisheries technician working on Coho smolt production. Continuing at AquaSeed Corporation, Patty moved into broodstock selection and currently manages the SweetSpring Salmon egg production programs. The egg production programs cover pedigree genetics and securing egg production to supply the SweetSpring Coho Salmon production facilities.

Jeff Hudson, Rochester Production Manager

Jeff began working part time with SweetSpring 8 years ago. In college, he majored in Architectural Engineering but he was always drawn to salmon aquaculture. At SweetSpring, Jeff has been involved with all areas of freshwater salmon production, from broodstock spawning and smolt production to facility construction and maintenance. Currently he is managing the SweetSpring sustainable Coho production for market, at the new Rochester recirculation facilities. With a new recirculation unit coming online in March, Jeff has his hands full with final testing and quality assurance. Jeff enjoys being outdoors at every opportunity and is often seen, at the weekends, with a fishing fly rod in his hand.

Appendix B
Report Excerpt

Seafood Watch

Seafood Report

MONTEREY BAY AQUARIUM®

Farmed U.S. Freshwater Coho Salmon

Oncorhynchus kisutch

October 26, 2009

Syrah Merkow McGivern
Aquaculture Research Analyst
Monterey Bay Aquarium
and
Thom Gilbert
Consulting Researcher

Report Excerpt

The following pages contain an excerpt from the report identified in the preceding page. This excerpt contains information about the fresh water Pacific Coho salmon raised and sold by 'Domsea Farms' under the brand name, 'SweetSpring Salmon'. In 2009, at the time this report was published, SweetSpring Salmon, Inc. was called AquaSeed Corporation. The corporate name was formally changed in 2011. Domsea Farms is the old name of the SweetSpring facility.

Copies of the complete report are available on-line from Monterey Bay Aquarium Seafood Watch at www.montereybayaquarium.org.

Also appended to this document is the most current Monterey Bay 'SuperGreen' list from the Monterey Bay Aquarium Sea Watch website.

About Seafood Watch® and the Seafood Reports

Monterey Bay Aquarium's Seafood Watch® program evaluates the ecological sustainability of wild-caught and farmed seafood commonly found in the United States marketplace. Seafood Watch® defines sustainable seafood as originating from sources, whether wild-caught or farmed, which can maintain or increase production in the long-term without jeopardizing the structure or function of affected ecosystems. Seafood Watch® makes its science-based recommendations available to the public in the form of regional pocket guides that can be downloaded from www.seafoodwatch.org. The program's goals are to raise awareness of important ocean conservation issues and empower seafood consumers and businesses to make choices for healthy oceans.

Each sustainability recommendation on the regional pocket guides is supported by a Seafood Report. Each report synthesizes and analyzes the most current ecological, fisheries and ecosystem science on a species, then evaluates this information against the program's conservation ethic to arrive at a recommendation of "Best Choices", "Good Alternatives" or "Avoid". The detailed evaluation methodology is available upon request. In producing the Seafood Reports, Seafood Watch® seeks out research published in academic, peer-reviewed journals whenever possible. Other sources of information include government technical publications, fishery management plans and supporting documents, and other scientific reviews of ecological sustainability. Seafood Watch® Research Analysts also communicate regularly with ecologists, fisheries and aquaculture scientists, and members of industry and conservation organizations when evaluating fisheries and aquaculture practices. Capture fisheries and aquaculture practices are highly dynamic; as the scientific information on each species changes, Seafood Watch®'s sustainability recommendations and the underlying Seafood Reports will be updated to reflect these changes.

Parties interested in capture fisheries, aquaculture practices and the sustainability of ocean ecosystems are welcome to use Seafood Reports in any way they find useful. For more information about Seafood Watch® and Seafood Reports, please contact the Seafood Watch® program at Monterey Bay Aquarium by calling 1-877-229-9990.

Disclaimer

Seafood Watch® strives to have all Seafood Reports reviewed for accuracy and completeness by external scientists with expertise in ecology, fisheries science and aquaculture. Scientific review, however, does not constitute an endorsement of the Seafood Watch® program or its recommendations on the part of the reviewing scientists. Seafood Watch® is solely responsible for the conclusions reached in this report.

Seafood Watch® and Seafood Reports are made possible through a grant from the David and Lucile Packard Foundation.

MONTEREY BAY AQUARIUM®

Seafood Watch Farmed U.S. Freshwater Coho Salmon Report October 26, 2009

This report focuses on the sole commercial producer at the time of writing, Domsea Farms owned by AquaSeed Corporation, as a representative example of the industry. The recommendation is based on this farm and the U.S. federal regulations that apply to this type of aquaculture operation. Domsea Farms is a vertically integrated freshwater coho salmon farm producing 50–100 tons of freshwater live weight coho salmon per year in western Washington state. It shares a site and water source with its associated hatchery, Domsea Broodstock, also owned by AquaSeed Corporation. A farm and hatchery formerly operated at the same site under the name Swecker Salmon Farm (EPA 2004). Domsea Broodstock raises salmon eggs for Domsea Farms, for sale to other aquaculture operations and for stock enhancement in Lake Oroville, California.

Figure 2. Grow-out tank at AquaSeed's Domsea Farms (Photo by G. Shester, Monterey Bay Aquarium).

The Domsea® pedigree strains (odd and even year) of Coho salmon raised for food fish production originated from Skykomish River Coho in Washington state. The Domsea Coho has been bred for over 16 generations since 1977. Beginning in 1986, the Domsea brood stock has been cultivated in freshwater through the entire life cycle (Neely et al. 2008), creating the first generation of land-based freshwater-bred Coho salmon. The stock has also been selected for the best energy utilization and feed efficiency to promote rapid growth (Myers et al. 2004, Neely et al. 2008). The Domsea Coho salmon raised at Domsea Farms to produce SweetSpring brand Coho have a two-year life cycle, large body weight and high smolt survival in the first year of life (Tave 1989). According to Mr. Per Heggelund, owner of AquaSeed Corporation, Domsea Coho salmon is harvested at two size classes: 650 grams and 1.4 kilograms (live weight) to produce SweetSpring fillets of 5 oz and 12 oz, respectively (P. Heggelund 2009, pers comm.).

Stock density is kept at typical levels compared to similar production systems, although these levels are quite high compared to typical open-water cage salmon farms. According to Mr. Greg Hudson, a Vice President of Production for AquaSeed and manager of both Domsea Farms and the Domsea Brood Stock hatchery, the Domsea Brood Stock is maintained at approximately 16 kg/m3, although this may increase to 48 kg/m3 at times (G. Hudson 2009, pers comm.). Domsea Farms reports densities between 35 and 40 kg/m3 in their grow-out tanks (P. Heggelund 2009, pers comm.).

The primary inputs to the grow-out tanks are feed, well-water sourced from the site, salt and calcium chloride, which are generally used in soft-water hatcheries to increase the water hardness without significantly increasing the salinity of the water (Mazik et al. 1991). All waste from the grow-out and hatchery tanks exits via gravity flow into a series of settling ponds separated by pipes with small holes, cages and grates (Fig. 5). The settling ponds serve to treat the effluent, allowing suspended solids to settle to the bottom of the pond for subsequent removal land use as fertilizer on nearby farms. Effluent outfalls discharge from the settling ponds through a pond drain pipe into a wetland bordering the Black River (Fig. 3) (EPA 2004). Rate of waterflow from the wetland over the river bank fluctuates, depending on season, weather, and rate of flow leaving the farm (EPA 2004, USGS 2008). Mr. John Kerwin, the Conservation Biology Unit Leader of the Fish Program for the Washington Department of Fish and Wildlife (WDFW) verified that the Black River drains into the Chehalis River system (J. Kerwin 2009, pers comm.).

Figure 3. Schematic diagram of the Domsea Brood Stock Coho salmon farm in Rochester, Washington showing farm layout and proximity of settling ponds to the wetland and the Black River. This photo was taken before the construction of several new grow-out tanks (Google). The farm is classified as a flow-through system in this report. The broodstock and hatchery are operated in single-pass flow-through systems and the grow-out tanks reuse 85–98% of their water. By definition, this is a 'closed' system, and this farm is able to exert a high level of

control over certain factors affecting the surrounding environment (CAAR 2008). The tank containment situation reduces to the possibility of escapes, for example. However, this system is not fully disconnected from the environment.

The farm utilizes components standard for all recirculation systems: mechanical filters to remove large particulate wastes, biological filters to break down soluble nitrogenous wastes, foam fractionators (or protein skimmers) to remove other soluble and partially soluble compounds, sterilizers to control bacterial levels (e.g., ultraviolet light or ozone), aeration or oxygenation to reduce carbon dioxide and increase oxygen, and heaters or coolers to maintain water temperature. Effluent is typically released post-treatment and may be subjected to secondary treatment before release.

MONTEREY BAY AQUARIUM®

The Super Green List

Connecting Human and Ocean Health

Seafood plays an important role in a balanced diet. It's often rich in omega-3 fatty acids, which help boost immunity and reduce the risk of heart disease, stroke, cancer and other ailments. Omega-3s are especially important for pregnant and nursing women, and young children. Unfortunately, some fish carry toxins that can become harmful when eaten frequently.

Good for You, Good for the Oceans

Combining the work of conservation and public health organizations, the Monterey Bay Aquarium has identified seafood that is "Super Green," meaning that it is good for human health and does not harm the oceans. The Super Green list highlights products that are currently on the Seafood Watch "Best Choices" (green) list, are low in environmental contaminants and are good sources of long-chain omega-3 fatty acids.

This effort draws from experts in human health, notably scientists from the Harvard School of Public Health (HSPH) and Environmental Defense Fund (EDF). The Monterey Bay Aquarium will continue to work with these organizations to balance the health and environmental attributes of seafood. The Super Green list includes seafood that meets the following three criteria:

- ☐ Low levels of contaminants (below 216 parts per billion [ppb] mercury and 11 ppb PCBs)
- ☐ The daily minimum of omega-3s (at least 250 milligrams per day [mg/d])*
- ☐ Classified as a Seafood Watch "Best Choice" (green)

The Best of the Best: September 2011

- ☐ Albacore Tuna (troll- or pole-caught, from the U.S. or British Columbia)
- ☐ **Freshwater Coho Salmon** (farmed in tank systems, in the U.S.)
- ☐ Oysters (farmed)
- ☐ Pacific Sardines (wild-caught)
- ☐ Rainbow Trout (farmed)
- ☐ Salmon (wild-caught, from Alaska)

Appendix C

High Plains Coho

The Miller Hutterite Colony is ramping up production of freshwater Coho at a novel new recirculation facility in high plains Montana

By John G. Nickum

A Coho salmon farm on the high plains of Montana, literally in the shadows of the Rocky Mountains, may seem like illusion, not a real farming operation. But, no, this is not an illusion. Those are real Coho salmon swimming in the tanks, enclosed in a large metal building just a few miles from the Rockies… and the men operating the systems are real farmers, with many years of experience growing crops and raising domestic livestock.

Remarkably, they have no previous experience raising fish, nor operating an aquaculture recirculation system. But, the system functions and the fish are growing. After seven months of operation, “Prairie Aquafarm Systems” is a “go.” Teton Fisheries, LLC, located near Choteau, Montana, is a creation of the Miller Hutterite Colony, but basically operates as a joint venture with SweetSpring Salmon. The land, buildings, and equipment are owned by the Colony. The Colony also provides the labor, water and utilities to operate the facility. The unique, fast growing freshwater Coho were developed by SweetSpring Salmon, Inc., in Washington State.

The salmon are provided to Teton Fisheries as eyed eggs. The contractual agreements between SweetSpring Salmon and the Colony provide a legal basis for a system best described as a grow out operation. A similar operation and agreement is in place with the East End Hutterite Colony near Havre, Montana.

The Genesis

So, how did this unlikely venture come to be? Not surprisingly, another party served as the catalyst, bringing these partners together. Jeff Mah, the Vice-President for Marketing and Business Development at Envirotech AG Systems, Ltd, probably deserves the additional title of “matchmaker.” Jeff has a long history of working with Hutterite colonies on livestock production systems. When the instability of hog markets caused the Hutterites to consider a new venture, Jeff recognized the potential for a

freshwater Coho venture based on the systems developed by SweetSpring Salmon. Many months of negotiations, including difficult permitting processes, and the cooperation of several additional support businesses, eventually led to a functioning fish farm.

Land-based Salmon

Land-based, recirculation systems for rearing an anadromous fish a thousand miles from the ocean do not just happen. Jeff Mah had worked previously with Henning Gatz of Aquacare Environment, Inc and Per Heggelund of SweetSpring Salmon. The foundation was in place, but, many decisions remained to be made. Choosing a recirculation system was a critically important step. The one selected was the HTE Biofilter designed by Holder-Timmons, LLC, which is sold by Aquacare Environment, Inc.

A unique fish in a unique system requires a specially designed feed. Bio-Oregon has developed a feed specifically formulated for use in recirculation systems. The feed includes modest amounts of fish meal and fish oils, is designed to produce fecal pellets compatible with a bio-filter, and still achieves efficient feed conversion and rapid fish growth.

Environmental Watchdog

Perhaps one of the most unusual aspects of this venture is that Seafood Watch, the environmental “watchdog” of the Monterrey Bay Aquarium, has given the freshwater Coho produced by SweetSpring Salmon, its highest green, sustainable rating, ”Best Choice;” commonly called, “Super Green.” Earning this classification opens additional markets with consumers focused on environmental issues, as well as, food quality. Even David Suzuki, the long-time foe of ocean salmon farming, has even given his approval to the SweetSpring’s freshwater Coho production systems, as operated at the Rochester, Washington facility.

The Miller Colony’s system is actually an improvement in terms of bio-safety over the SweetSpring operation in Rochester that was reviewed by Seafood Watch. There is virtually no effluent from the system.

The small amount of fish effluent goes into a Harvestore “sewage” tank, is mixed with effluent from other livestock operations, and ultimately sprayed on flat farm fields from which there is no runoff. There is simply no opportunity for fish or disease agents to gain access to the waters of Montana. Montana Fish, Wildlife, and Parks insisted that there must be zero probability for such escapes before it was willing to grant permits to operate the facility. The conditions of the permits are so stringent that even professional visitors, including this writer, are not permitted access to the rearing units.

Operational Aspects

A discussion of the operation and its progress to date will help readers understand the system, its unique features, and the potential for similar systems in other locations. Such a system that can be set up in nearly any location, has no connection to natural waters, and can be operated by inexperienced fish farmers has been the “Holy Grail” for entrepreneurs bent on becoming fish farmers for many years. Is this that system? Only time and experience will tell if this is the system.

There is an old adage that states “a fish farm is only as good as its water supply,” or stated differently, “good, clean water… no problems; dirty water… nothing but problems.” Water for the Choteau operation comes from a well that is only 45’ (~14 meters) deep. So far, the maximum pumping rate has been 25 gpm (gallons per minute). Typically, even less water, ~5 gpm, is needed. Given the shallow depth of the well, its temperature varies somewhat, reaching a low of 4°C (39°F) in winter. Water temperature in Coho grow-out units should be maintained around 15°C (59°F) to obtain maximum growth rates.

The well produces hard water, approximately 500 mg/l hardness, but chloride levels are low (~40mg/l), so, calcium chloride is added to raise the level to optimal conditions for Coho. Saturation levels for oxygen are maintained by an air blower system incorporated into the recirculation system, but treatment with ozone (and oxygen injection if needed) provides consistent levels of dissolved oxygen.

Disease-Free, so far

The ozone injection also maintains an environment free of disease agents. In seven months of operation, the Colony has experienced no disease outbreaks. When eyed eggs are brought to the Choteau facility from the SweetSpring Salmon brood stock hatchery, they are free of known disease agents, but never-the-less, the eggs are given an iodophore dip as an additional precaution. Clean water, plus clean eggs, plus no interactions with outside sources of disease agents has resulted in no diseases.

Thus far, the HTE Biofilter systems at Teton Fisheries have not experienced any “crashes,” a problem that has plagued many recirculation systems. Skeptics may argue that “it’s just a matter of time” and “what can happen, will happen.” However, there may be some simple answers to the success story. A common problem with biofilters has been insufficient time to allow the beads to become fully charged with the bacteria that feed on the nitrogenous wastes. The filters at Teton Fisheries were given an initial charge of ammonium chloride and allowed 6-8 weeks to fully develop before any fish and feed were added to the system. The 1mm Styrofoam beads seem to be a preferred substrate for a thriving bacterial colony. The system has never been overfed, a common temptation for even experienced fish farmers. There is a direct relationship between the amount of feed placed in the system and the amount of nitrogenous waste, (ammonia) produced.

More feed does not necessarily produce more rapid growth, but, too much feed is nearly a certain prescription for a system crash. An inexperienced farmer probably is more willing to stick to the prescribed feeding schedule and, thus, not crash the system.

Unique Fish

Unique fish stock is the final component of the "high plains coho" farm. The story behind SweetSpring freshwater Coho goes all the way back to Dr. Lauren Donaldson's pioneering work with steelhead trout and the family-based breeding program used to develop Domsea-Donaldson steelhead trout. This breeding program is similar to those used in poultry industries and has now been applied by SweetSpring to 20 generations of Coho salmon. The result is a strain of Coho that is adapted to freshwater, grows rapidly, maintains excellent feed conversion, and fish with preferred taste, texture, aroma and color.

The complete history of Domsea Farms, AquaSeed, and freshwater Coho is too lengthy for this article; however, the basic story is that AquaSeed acquired the Domsea Coho brood stock in 1991 from the Campbell Soup Company, which had bought Domsea Farms from Union Carbide, which had founded Domsea Farms in 1969. AquaSeed Corporation, now SweetSpring Salmon, Inc., continue the family-based genetic selection program to develop fish especially adapted to growers, such as, Teton Fisheries, and the sophisticated palates of today's consumers.

The eyed-eggs for the initial production at Teton Fisheries arrived at the Colony in December, 2010. They were incubated in standard incubating trays, but at several different temperatures to establish different hatching times and, subsequently, different lots of market-size fish. The fry then move through a series of three tanks in the "fry room." These tanks are equipped with automatic feeders programmed to provide feed in amounts appropriate for the number and size of the young fish. At 10°C, it takes about 100 days for swim-up fry to attain a weight of 10 grams. Once fingerling size is attained, the fish are transferred to larger, grow-out tanks in the main room of the production building.

Grow-out and Sales

As the fish grow and tanks begin to become crowded, (~250 g) the fish are pumped to additional grow-out tanks. The number of tanks in use is increased again and again as the fish grow, thus maintaining appropriate densities of fish while using no more tanks and water than is needed. Once harvest size (~3 kg) is attained the fish are headed and gutted onsite at the Colony, placed on ice, and shipped by truck to the Sweet Spring Salmon distribution center in Seattle, Washington. SweetSpring Salmon has contracted with the Overwaitea Food Group for the estimated production from the Choteau facility, and its sister facilities in Havre, Montana and Rochester, Washington. Production is staged so that market size fish are available throughout the year. Each lot of fish takes about one year to attain market size.

The “out of the box” sustainable production system was designed to be market-driven. The benefits of a coordinated system brings owner/operators closer to the consumer, which results in a preferred product for the consumers and more profit per pound of fish for the producer.

It remains to be seen whether or not the unique collaboration that is the basis for operating Teton Fisheries is the future for freshwater production of salmon, and potentially other species. Traditionally, energy costs have been a problem for recirculation aquaculture system; however, HTE has a developed a prototype that is predicted to reduce energy costs by a factor of five.

Land, facility development costs, and labor costs will vary from area to area. However, the ability to raise a desired species in any desired location with very low water and land requirements solves most of the constraints that have kept North American aquaculture from competing effectively with producers located in developing nations.