

APPENDIX B

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INSTORE CONSUMER INTERVIEWS

prepared for:

CALIFORNIA SALMON COUNCIL
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**CALIFORNIA SALMON COUNCIL
2000 INSTORE CONSUMER INTERVIEWS**

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CALIFORNIA SALMON COUNCIL 2000 INSTORE CONSUMER INTERVIEWS

EXECUTIVE SUMMARY

The California Salmon Council commissioned a study with JD Franz Research, Inc., to determine how California King Salmon can compete more effectively with farmed salmon. This report pertains specifically to the consumer interviews conducted by **FOOD MARKETING & ECONOMICS GROUP**.

52 consumers participated in one-on-one interviews during September, 2000 at 2 Mollie Stone's stores. This upscale grocer has 6 stores in Northern California's Bay Area. One of the stores selected was located in Greenbrae (Marin County) and the other was in Burlingame (San Mateo County). Both are known to be affluent communities.

The specific objectives of this research were to:

- ✓ determine consumers' purchase and usage patterns for fresh salmon;
- ✓ assess consumers' awareness and information needs regarding salmon species, the fishery, differences between farmed and wild salmon, health benefits, handling and recipes; and
- ✓ measure consumers' attitudes toward various characteristics of salmon and labels.

These findings and conclusions relate only to affluent consumers in Northern California.

KEY FINDINGS

- ◆ 21% bought their salmon only at Mollie Stones. 13% also shopped for salmon at Whole Foods-another upscale chain, 10% mentioned Draeger's and another 10% cited fish markets in Half Moon Bay.
- ◆ Fresh salmon is very popular; three-fourths indicated that it was the fish that they bought the most and 18% said that it was the fish that they bought second most.
- ◆ Most consumers (77%) usually grill or barbecue their salmon.
- ◆ These upscale shoppers have some awareness of different salmon. 64% mentioned one or more species without any aided choices. They were most aware of Coho salmon (31%), followed by King (25%). 5 consumers mentioned Copper River.
- ◆ Almost half were aware that salmon is caught commercially in California.

- ◆ 2 out of 3 respondents were aware of wild salmon; they knowingly bought it and/or identified a difference between wild and farmed salmon. All of the male respondents were aware of wild salmon.
- ◆ There was limited awareness of the commercial California King salmon season.
- ◆ Most consumers (75%) were aware of specific health benefits associated with eating salmon.
- ◆ Although they are already fairly knowledgeable about the health benefits of salmon, most respondents (75%) said that they would pick up a brochure about the nutritional content and health benefits of salmon at a seafood counter. They expressed similar levels of interest in brochures with cooking tips or recipes (both 77%). They were somewhat less interested in brochures about handling guidelines (61%) or the salmon fishery (53%).
- ◆ The characteristics that consumers were most likely to rate as “extremely important” to their salmon buying decision were: “fresh tasting”--100% and “fresh looking”--94%. The next most important characteristics were:

fed no dyes or additives	52%
convenient to buy	48%
dark pinkish-orange flesh	46%
certified as a sustainable fishery	41%

- ◆ The characteristics least likely to be rated as extremely important were those most identifiable with California King salmon—“caught in California”, “caught locally” and “King salmon species”.
- ◆ However, when asked to select between different salmon (Alaska King, California King, Farmed Atlantic, Farmed Chilean and Pacific King) if all the fish looked equally good and were priced identically, consumers preferred California King the most (44%), followed by Alaska King (30%). Pacific King was the third most favored (16%), while 10% selected Farmed Atlantic and none chose Farmed Chilean. They preferred California King salmon over Alaska King salmon and farmed salmon because of its freshness.
- ◆ When shown 4 possible identifying phrases for California King salmon and asked to select the one that would most interest them into buying the product, the most favored identifiers were “Ocean Fresh California King Salmon” (39%) and “Wild California King Salmon” (35%). “Ocean Caught California King Salmon” was selected by 18% and “Natural California King Salmon” was the least favored (6%). “Ocean Fresh California King Salmon” was selected mainly because it was the freshest sounding. “Wild California King Salmon” was chosen either because it was the freshest sounding or because the respondent liked wild salmon.

CONCLUSIONS & RECOMMENDATIONS

While salmon tends to be the favorite fish among upscale consumers, few are aware of California King salmon or know much about the fishery. Consequently, most consumers do not ask specifically for California King salmon at fish counters. Farmed Atlantic salmon has become a convenient substitute for many grocery stores.

Although Alaska's upcoming salmon marketing campaign will focus on the health benefits of salmon, the Salmon Council does not need to do the same; awareness of these benefits is already high among affluent consumers.

Specifically, the Salmon Council should promote the California origin, freshness and wild nature of its fish. The Salmon Council cannot rely on grocery stores to distinguish wild salmon from farmed salmon. It must develop an identifiable brand name and promote it at every opportunity possible given its limited budget.

The Salmon Council must be careful not to make negative statements about farmed salmon. Instead, it must educate its target audience, primarily upscale and/or environmentally-conscious consumers, about the meaningful differences between California King salmon and farmed salmon.

Specific recommendations are:

- ✓ ***The Salmon Council should promote Wild California King Salmon as its brand. The logo should be redesigned to reflect the "wild" positioning.***
- ✓ ***Consumer awareness of California's salmon fishery is very limited. There should be a major public relations campaign at the beginning of each season. Grocery stores and restaurants committed to California King Salmon could be featured. Public relations efforts should include information about the season to emphasize that the product is special because of its limited availability. Publicity events should feature individual fishermen who describe how they fish. The freshness of California King salmon, nature of the fishery and soundness of the management practices should be publicized.***
- ✓ ***A brochure about California's salmon fishery is a high priority. It should include information about the salmon life cycle, management practices, what salmon eat and how this affects the flesh color. It should also highlight how most California salmon fishermen are small businesses, and the superiority of California King salmon—its freshness, firm texture and robust flavor. Since consumers typically have to wait to place their orders and get the seafood wrapped, seafood counters are an ideal location to distribute the brochure. This brochure could also be provided to the food service sector.***

- ✓ ***The Salmon Council needs to develop brochure(s) with easy-to-prepare grilling recipes. The recipes or cooking tips could include encouragement to prepare extra grilled salmon; the leftover fish can be used in a quick salad or pasta dish. Baking recipes could be offered as being something different. A brief review of the health benefits should be included. The brochure should be distributed through wholesalers at seafood counters. The Salmon Council could investigate partnering on these brochures with California-based specialty food companies that market marinades and sauces, such as Napa Valley Kitchens, Earth and Vine Provisions and Annie Chun's.***
- ✓ ***The Salmon Council needs to work with wholesalers to ensure that California King salmon is available during the season at grocery stores in affluent areas, particularly Mollie Stone's, Whole Foods, Draeger's, Andronico's, Woodlands Market, Crystal Springs Fish Market, Lundardi's and select Safeway stores in the Bay Area. The wholesalers should be supplied with brochures to be distributed during deliveries.***
- ✓ ***The Salmon Council's website should be enhanced with the information provided in its brochures—namely, the fishery, easy-to-prepare recipes, cooking tips and health benefits. The fishery should be described in detail, and the freshness of the fish should be emphasized.***
- ✓ ***The Salmon Council can raise awareness of the differences between California King salmon and farmed salmon by capitalizing on its favorable review from the Monterey Bay Aquarium. It should seek assessments from the Audubon Society and other environmental organizations. The Salmon Council could also consider alliances with the Chefs Collaborative and the Pacific Coast Fishermen's Federated Association's Institute for Fishery Resources; both groups are developing "Good Fish" lists.***
- ✓ ***The Salmon Council should promote the finding to wholesalers and grocery fish buyers that "9 out of 10 Northern California salmon consumers prefer King salmon over Atlantic salmon."***
- ✓ ***The Salmon Council should promote the fact that consumers preferred California King salmon over Alaska King and farmed salmon because of its freshness, particularly to wholesalers and grocery fish buyers shortly before the opening of the 2001 California salmon season.***
- ✓ ***The Salmon Council needs to promote its brand to white tablecloth restaurants. The Salmon Council should distribute its fishery brochure through wholesalers and chef organizations (such as Chefs Collaborative). Customized metal gill tags, with the Salmon Council logo and fishing vessel name, would be ideal for promoting the "brand name" with wholesalers and chefs, and distinguishing it from farmed salmon.***

CALIFORNIA SALMON COUNCIL 2000 INSTORE CONSUMER INTERVIEWS

I. INTRODUCTION & OBJECTIVES

The California Salmon Council (Salmon Council) commissioned a study with JD Franz Research, Inc., to determine how California's salmon fishermen can compete more effectively. As part of the effort to determine how to brand and promote California King salmon most effectively, JD Franz Research subcontracted with Food Marketing & Economics Group to conduct instore interviews to supplement the information obtained during consumer focus groups.

The focus groups were conducted during August, 2000 in Northern and Southern California with consumers who were primarily middle class. It was found that salmon is generally the most popular fish among those who prepare it fairly regularly. In addition, Pacific King salmon was both the most popular type and the most appealing when different kinds of salmon were described.

Initially, the focus group participants had no clear preference for wild salmon over the farmed product. However, they did express a strong preference for wild salmon after the methods of salmon farming were described.

Consequently, the instore interviews were conducted with affluent consumers who were presumed to be more aware of and be heavier buyers of fresh salmon than middle class consumers who are more price sensitive. The specific objectives of this research were to:

- ✓ determine consumers' purchase and usage patterns for fresh salmon;
- ✓ assess consumers' awareness/information needs regarding salmon species, the fishery, differences between farmed and wild salmon, health benefits, handling and recipes; and
- ✓ measure consumers' attitudes toward various characteristics of salmon and labels.

The findings from this larger sample of consumers can be generalized, however, only to affluent consumers in Northern California; the margin of error is +/-14%. Affluent consumers are the logical target market because fresh King salmon is a relatively expensive protein food. Since California's salmon fishery is focused in Northern California, it is most efficient to understand the "native" customer base before attempting to market the product in "foreign" territory.

II. METHODOLOGY

One-on-one interviews were conducted with 52 consumers during September, 2000 at two Mollie Stone's stores in Bay Area. This upscale grocer has 6 stores in Northern California's Bay Area. One of the stores selected was located in Greenbrae (Marin County) and the other was in Burlingame (San Mateo County). Both are known to be affluent communities.

The stores were carrying both wild and farmed salmon. The wild salmon was labeled "Fresh Local Salmon Fillets" priced at \$10.99, while the farmed salmon was labeled "Fresh Salmon Steaks" priced at \$8.99.

To participate in the survey, consumers had to have purchased fresh salmon at the particular stores during the past six months, and they had to be the primary grocery shopper for their household. Only consumers appearing to be between the ages of 20 and 54 were approached.

The findings are reported in the following section, along with recommendations. The recommendations are also restated in the final section. The tabulated responses are displayed in Appendix A. Miscellaneous comments are reported in Appendix B. Logos of some salmon-related organizations are displayed in Appendix C.

One fourth of the respondents were male, which is similar to national grocery shopping trends. As expected, over half had annual household incomes in excess of \$100,000 and one third had annual household incomes in excess of \$200,000. Only 2 of the respondents were not Caucasian. Two thirds were between the ages of 35 and 54. Very few young shoppers (under 35) were observed in the stores; this is probably attributable to the upscale nature of the communities.

III. FINDINGS

A. Purchase & Usage

--Stores Shopped for Fish

Consumers were asked where they shopped for fresh salmon besides the Molly Stones stores. 21% bought their salmon only at Mollie Stones. 13% also shopped for salmon at Whole Foods, another upscale chain, 10% mentioned Draeger's and another 10% (all at the Burlingame store) cited fish markets at Half Moon Bay. Curiously, none of the Greenbrae store shoppers mentioned Bodega Bay, although several commented how salmon was sold there. Other specialty stores identified included Andronico's, Woodlands Market, Crystal Springs Fish Market, Trader Joe's (although it sells only frozen, not fresh, salmon) and Lundardi's (see Appendix B). Safeway was mentioned by 4 consumers, and Costco by 2 consumers.

The Salmon Council needs to work with wholesalers to ensure that California King salmon is available consistently during the season at the stores mentioned--Mollie Stone's, Whole Foods, Draeger's, Andronico's, Woodlands Market, Crystal Springs Fish Market, and Lundardi's. The wholesalers should also be supplied with promotional materials which they can distribute to the stores during deliveries.

Although Safeway's regular salmon program is restricted to farmed salmon, some stores do sell wild salmon. The Salmon Council should also work with the wholesalers who supply Safeway Stores in San Mateo and Marin counties.

--Favorite Fish

Fresh salmon is very popular; three-fourths indicated that it was the fish that they bought the most and 18% said that it was the fish that they bought second most. Other fish that salmon consumers are likely to buy are swordfish, halibut, sea bass and trout. A few stated that salmon was the only fish they bought.

Since salmon is already highly favored, the California Salmon Council needs to focus on making consumers aware of the differences between wild and farmed salmon and convincing them to switch from farmed salmon to California King salmon during the season. (The specifics related to this recommendation are presented later in this report.)

--Cooking Salmon

Most consumers (77%) usually grill or barbecue their salmon. One out of seven reported that they usually baked their salmon.

The California Salmon Council's recipe brochure(s) should include easy-to-prepare grilling recipes. The recipes or cooking tips should encourage preparing extra grilled salmon; the leftover fish can be used in a quick salad or pasta dish (with accompanying recipes). Recipes for baked salmon could be offered as being something different.

The Salmon Council could partner on promotions (presumably, demos) with California-based specialty food companies who market marinades and sauces, such as Napa Valley Kitchens, Earth and Vine Provisions and Annie Chun's. Recipes and brochures about the California salmon fishery should be distributed during the demos.

B. Awareness

--Kinds of Salmon

These upscale shoppers have some awareness of different salmon species. 64% mentioned one or more species without any aided choices. They were most likely to be aware of Coho salmon (31%), followed by King (25%). One out of 5 mentioned Pacific salmon, 5 consumers mentioned Copper River, 3 cited chum and 2 mentioned Sockeye.

The Salmon Council's materials should highlight why King salmon is considered the finest salmon species. This information will also increase consumers' awareness that most farmed salmon is the Atlantic species.

--Salmon Catch Locations

Although the Pacific Coast has a significant salmon fishery, the majority of shoppers were not aware of this. When asked to identify where salmon is caught commercially (besides Alaska), almost half (45%) mentioned California. One-third identified Washington and 28% specifically mentioned Oregon. 31% stated that salmon was caught in the Atlantic/East Coast.

Although these upscale consumers were more aware of salmon fishing in California than were the focus group respondents, their awareness that salmon is caught commercially in California can be increased significantly. The Salmon Council should engage in more public relations activities, especially at the beginning of the season. The content of its website should be enhanced and promoted more extensively.

--Wild Salmon

Awareness of wild salmon was measured in 3 ways. Consumers were asked if they had bought any wild salmon during the past 6 months. 46% reported that they had, while some said they did not know if the salmon they had bought was wild.

61% were aware of differences between wild and farmed salmon. The difference they mentioned the most was that wild salmon tastes better than farmed salmon. A few mentioned differences in habitat or fat content, in a favorable context about wild salmon (see Appendix B).

These two sets of responses were then combined to develop an overall measure of awareness of wild salmon. Two out of 3 respondents were considered to be aware of wild salmon; they had purchased wild salmon and/or had identified a difference between the 2 kinds of fish.

All of the male respondents were aware of wild salmon, compared to only 55% of the females (Table 1). This could be attributable to males generally having more fishing experience than females.

**TABLE 1
AWARENESS OF WILD SALMON BY SEX**

AWARE OF WILD SALMON	SEX		TOTAL
	FEMALE	MALE	
YES	22 55%	12 100%	34 65%
NO	18 45%	0 0%	18 35%

Previous interviews with grocery stores indicated that the upscale markets tend to use the “wild” label, while the large chains label it as “local “ or “Pacific” when they carry California King salmon for a special. Typically, farmed salmon is labeled as “fresh salmon” or “fresh Atlantic salmon” without mentioning the term “farmed”.

The California Salmon Council cannot rely on grocery stores to distinguish wild salmon from farmed salmon. It must develop an identifiable brand name and promote it at every opportunity possible given its limited budget, including developing a distinctive logo, website, public relations activities, and instore materials. (More specifics related to the brand name are discussed further in this report).

--Salmon season

Respondents were told that commercial salmon fishing is regulated and asked when they thought the California’s commercial salmon season was. Over half (58%) said that they had no idea, and most of the others made incorrect guesses. Four respondents thought California’s salmon season was during the summer, and two others came close with guesses of April through September or October.

Awareness of California’s salmon season is very limited. There should be a major publicity campaign at the beginning of the season. Promotional materials should emphasize that the product is special because it is limited. This would also raise awareness of the difference between California King salmon and farmed salmon. Information about the season should be clearly displayed on the website for consumers and the food service and wholesale trades.

Grocery stores (particularly those identified earlier) and restaurants committed to California King Salmon could be featured in this publicity.

The Salmon Council would also benefit from an alliance with Chefs Collaborative, a group of chefs who are committed to advancing sustainable food choices and emphasizing local, seasonal foods in

their restaurants.

--Health Benefits

Most consumers (75%) were aware of specific health benefits associated with eating salmon. 42% specifically mentioned the high level of Omega-3 fatty acids in salmon. 37% stated that salmon reduces the risk of heart disease (some of them also mentioned the Omega-3 fatty acids). 8% reported that salmon has “good oils”. 10% commented that they knew eating fish was healthy, but were not aware of the specific benefits of eating salmon. Several volunteered that a physician had advised them (or a family member) to eat salmon. Only 15% were not aware of any health benefits associated with eating salmon.

Although Alaska’s upcoming salmon marketing campaign will focus on the health benefits of salmon, the Salmon Council does not need to do the same. Among upscale consumers in California, such a message would have minimal effect on sales because they are already aware of salmon’s health benefits. Instead, the Salmon Council marketing program should focus the California origin, freshness and wild nature of its fish.

--Information Needs

Although they are already fairly knowledgeable about the health benefits of salmon, most respondents (75%) said that they would pick up a brochure about the nutritional content and health benefits of salmon at a seafood counter. They expressed similar levels of interest in brochures with cooking tips or recipes (both 77%).

They were somewhat less interested in brochures about handling guidelines (61%) or the salmon fishery (53%).

Since consumers at upscale food stores typically have to wait to place their orders and get their seafood wrapped, seafood counters are an ideal location to place brochures. Although consumers were the least interested in the salmon fishery, such a brochure would be attractive to the 53% who said they were interested. This brochure could also be provided to the food service sector.

A separate brochure combining recipes and cooking tips for consumers should be of secondary priority. Health benefits should be reviewed briefly in the brochure. All of the information should also be added to the Salmon Council’s website.

C. Attitudes

--Salmon Characteristics

In a University of Idaho study regarding trout, taste was rated as the most significant factor affecting consumers’ seafood purchase decisions, followed by freshness, appearance and smell. For this analysis, consumers were asked to rate the

importance of 14 characteristics on their salmon buying decision. The rating scale ranged from 1 to 5, where 1 meant “not important at all” to 5 being “extremely important”. The percentage of respondents rating each characteristic as “extremely important” is displayed in Table 2.

**TABLE 2
IMPORTANCE OF SALMON CHARACTERISTICS**

CHARACTERISTIC	% RATING AS "EXTREMELY IMPORTANT"
FRESH TASTING	100%
FRESH LOOKING	94%
FED NO DYES OR ADDITIVES	52%
CONVENIENT TO BUY	48%
DARK PINKISH-ORANGE FLESH	46%
CERTIFIED AS SUSTAINABLE FISHERY	41%
REASONABLY PRICED	35%
GOOD VALUE FOR \$	33%
CAUGHT BY FISHERMEN WHO ARE SMALL BUSINESSES	33%
ALWAYS AVAILABLE	28%
LIVED IN THE OCEAN	28%
CAUGHT IN CALIFORNIA	17%
CAUGHT LOCALLY	15%
KING SALMON SPECIES	13%

Consistent with the University of Idaho study, all of the respondents rated “**fresh tasting**” as “extremely important”. The next highest rated characteristics was “**fresh looking**”, which was rated “extremely important” by 94% of the respondents. Freshness is clearly a critical factor in consumers’ choice of any fish.

The importance of other characteristics then fell off dramatically. The following characteristics were rated as “extremely important” by approximately half of the respondents:

- “**fed no dyes or additives**” (52%)
- “**convenient to buy**” (48%)
- “**has dark pinkish-orange flesh**” (46%)

It is difficult to promote the fact that California King salmon are fed no dyes or additives without “trashing” farmed salmon. However, the message can be conveyed by describing what wild salmon do eat. Such information can be included in the brochure about California’s salmon fishery for both consumers and chefs.

“**Convenient to buy**” is an issue that the Salmon Council is tackling by seeking broader distribution. Farmed salmon is convenient to buy because most grocery stores carry it year-round while many offer wild salmon infrequently or not at all. However, a smaller proportion (28%) rated the salmon being “**always available**” as “extremely important.”

Apart from trying to convince more chains to carry California King salmon during the season, the best strategy for addressing these characteristics is make California King salmon so special that it is worth the inconvenience of having to shop around for it. Copper River salmon is not convenient to buy, but it has a loyal following. Again, a brochure about the California salmon fishery, its management practices, life cycle, and superiority of the fish--the freshness, firm texture and robust flavor--will convey its specialness.

California King salmon is typically darker than farmed Atlantic salmon, so it is more likely to meet the “dark pinkish-orange flesh” requirement. However, the difference is not always apparent unless the 2 kinds of fish are presented side by side. Some respondents commented that they associated the deeper color with more flavor.

California King salmon’s flesh color should be discussed in the brochure about the fishery and recipe brochure. It would be ideal to explain how the coloring is dependent on what the salmon feed on.

“**Certified as a sustainable fishery**” was a moderately important characteristic. Alaska’s salmon fishery was recently certified as sustainable by the Marine Stewardship Council. California’s salmon fishery is reported to have sound management practices by the Monterey Bay Aquarium in its Seafood Watch guide. The Audubon Society’s Guide to Seafood rates Alaska’s salmon fishery as healthy, but “most wild salmon elsewhere are in severe trouble.” It also states that salmon farming pollutes and displaces wild fish.

The Salmon Council can raise awareness of the differences between California King salmon and farmed salmon by aligning itself with environmental groups. The Monterey Bay Aquarium’s favorable rating should be publicized through press releases, the website and brochures. The Salmon Council should seek similar reviews by the Audubon Society and other environmental organizations. It could develop alliances with The Chefs Collaborative and/or the Pacific Coast Federation of Fishermen’s Association’s Institute for Fishery Resources; both groups are developing “Good Fish” lists. The Salmon Council will have to select among potential alliances carefully for credibility and fairness.

Although the consumers interviewed were affluent, price was somewhat important to them as a group; 35% considered “**reasonably priced**” to be extremely important and 33% rated “**good value for the money**” to be extremely important. Others confessed that they did not even look at the price when selecting fish that “looked good”.

One-third of the shoppers considered the fact that salmon were **caught by fishermen who are small businesses** to be extremely important. This attribute appealed to consumers who want to support local producers, such as small farmers. Consumers often believe that small businesses take more pride in their products, so they could infer that the fish is fresher if they knew it was caught by an independent fisherman.

The brochure about the salmon fishery should highlight the fact that most California salmon fishermen are sole proprietorships or family operations. Public relations activities could feature individual fishermen or their family members.

The Salmon Council should provide customized gill tags to reinforce the small business image. The metal tags should have the Salmon Council's logo on one side and the fishing vessel name on the other. Some grocery stores display whole fish in their seafood counters, where the gill tag would be visible to consumers. The gill tags should also have a beneficial impact on California King salmon's image among chefs and wholesalers.

Unfortunately, the characteristics that rated the least important were the ones that are most identifiable with California King salmon—"lived in the ocean", "caught in California", "caught locally" and "King salmon species". As previously discussed, only 45% were aware of California's salmon fishery. The lack of importance of "caught in California" is inconsistent with the shoppers' overall preference of California King salmon over salmon from other areas. The lack of importance of "caught locally" is also inconsistent with the fact that many later suggested labeling California King salmon as "local".

Since freshness is the most importance characteristic to salmon buyers, the relationship between freshness and California King salmon should be strengthened. This can be achieved in public relations activities and the brochure about the fishery, as well as on the Salmon Council's website.

The lack of importance of the King salmon species is not surprising, given the low level of awareness of the King salmon species (25%) as noted in the discussion about salmon species. Since most farmed salmon is Atlantic, it is meaningful to promote the identity of the King species.

As previously noted, the Salmon Council's materials should highlight how King salmon is considered the finest salmon. This information also increases consumers' awareness that most farmed salmon are the Atlantic species.

--Product Preference

After reviewing the importance of various characteristics in their salmon purchasing decision, shoppers were asked to select their preferred product. They were shown a card listing the following salmon, and asked to indicate which one they would buy if all the fish looked equally good and were priced identically:

- ◆ **Alaska King salmon**
- ◆ **California King salmon**
- ◆ **Farmed Atlantic salmon**
- ◆ **Farmed Chilean salmon**
- ◆ **Pacific King salmon**

California King salmon was the most preferred (44%), followed by Alaska King salmon (30%). Pacific King salmon was the third most favored (16%), while 10% selected Farmed Atlantic salmon and no one chose Farmed Chilean salmon.

Clearly, consumers prefer wild King salmon (90%) over the farmed Atlantic. Consumers are frequently given this choice at the grocery store, but the farmed product is typically not labeled “farmed” and the wild salmon is priced higher.

California King salmon was chosen most often because it sounded fresher than the other fish (Table 3). Alaska King salmon was chosen because of its reputation—shoppers considered it the best salmon or they were familiar with it. Their familiarity with Alaska King salmon is most likely attributable to the fact that restaurants often list Alaska King salmon on their menus.

**TABLE 3
PREFERRED SALMON BY REASON FOR PREFERENCE**

	SALMON PREFERRED			
	ALASKA KING	CALIFORNIA KING	FARMED ATLANTIC	PACIFIC KING
DON'T KNOW	1 7%			
FRESHER	2 13%	15 68%		2 29%
BEST SALMON	5 33%	4 18%		
MORE ENVIRONMENTALLY SOUND			3 60%	
FAMILIAR	5 33%	1 5%		
OTHER	2 13%	2 9%	2 40%	5 71%
Total	15	22	5	7

This finding that consumers preferred California King salmon over Alaska King salmon and farmed salmon because of its freshness should be promoted to wholesalers and grocery fish buyers, particularly when the 2001 California salmon season is approaching.

--Identifying California King Salmon

After being informed briefly about California's King salmon fishing industry, consumers were asked what key words should be used to identify the fish at seafood counters. 46% specifically mentioned using the word "local". 17% thought "fresh" was also important, and 8% suggested "line caught". Other phrases mentioned by 2 respondents were "California", "Wild" and "small business". 14% offered no suggestions.

Then the respondents were shown a card with 4 possible phrases for California King salmon and asked to select the phrase that would interest them the most into buying the product. The most favored identifiers were "Ocean Fresh California King Salmon" (39%) and "Wild California King Salmon" (35%). "Ocean Caught California King Salmon" was selected by 18% and "Natural California King Salmon" was the least favored (6%).

"Ocean Fresh California King Salmon" was selected mainly because it was the freshest sounding. "Wild California King Salmon" was selected either because it was the freshest sounding or because the respondent liked what wild salmon is (and is not). One respondent selected "Wild California King Salmon" because it "sounds like something you would get at a restaurant" (Appendix B).

There is considerable merit to this statement. Consumers typically become familiar with "new" products at restaurants.

In addition to promoting its brand at grocery stores, the California Salmon Council needs to promote it to white tablecloth restaurants. The Salmon Council should distribute its fishery brochure through wholesalers and chef organizations (such as Chefs Collaborative). The customized gill tags would be ideal for promoting the "brand name" with wholesalers and chefs, and distinguishing it from farmed salmon.

The Salmon Council should promote Wild California King Salmon as its brand. The term "wild" is critical to distinguishing it from farmed salmon. "Ocean Fresh California King Salmon" does not have a distinctive enough positioning.

The Salmon Council's logo should be redesigned to reflect the "wild" positioning. The current logo is too realistic; it needs to be stylized, like Capilano Pacific's Wildfish logo. The Alaska Seafood Marketing Institute's logo is too traditional looking to fit the wild positioning. (These logos are displayed in Appendix C.)

IV. CONCLUSIONS & RECOMMENDATIONS

California's salmon fishermen are now providing fish that rivals Copper River salmon in quality. While salmon tends to be the favorite fish among upscale consumers, few are

aware of California King salmon or know much about the fishery. Consequently, most consumers do not ask specifically for California King salmon at fish counters. Farmed Atlantic salmon has become a convenient substitute for many grocery stores.

Although Alaska's upcoming salmon marketing campaign will focus on the health benefits of salmon, the Salmon Council should not adopt this positioning; awareness of these benefits is already high among affluent consumers. Instead, it should focus on raising consumer awareness of the differences in salmon and getting them to switch from farmed salmon to California King salmon during the season.

Specifically, the Salmon Council should emphasize the California origin, freshness and wild nature of its fish. It cannot rely on grocery stores to distinguish wild salmon from farmed salmon. It must develop an identifiable brand name and logo, and promote it at every opportunity possible given its limited budget.

The Salmon Council must be careful not to make negative statements about farmed salmon. Instead, it must educate its target audience, primarily upscale and/or environmentally-conscious consumers, about the meaningful differences between California King salmon and farmed salmon.

The recommendations previously presented are restated below.

- ✓ ***The Salmon Council should promote Wild California King Salmon as its brand. The logo should be redesigned to reflect the "wild" positioning.***
- ✓ ***Consumer awareness of California's salmon fishery is very limited. There should be a major public relations campaign at the beginning of each season. Grocery stores (such as those identified earlier) and restaurants committed to California King Salmon should be featured. Information about the commercial season and the product's limited availability should be emphasized. Events could feature individual fishermen who describe how they fish. The freshness of California King salmon, nature of the fishery and soundness of the management practices should be publicized.***
- ✓ ***A brochure about California's salmon fishery is essential. It should include information about the salmon life cycle, management practices, what salmon eat and how this affects the flesh color. It should also highlight how most California salmon fishermen are small businesses, and the superiority of California King salmon—its freshness, firm texture and robust flavor. Seafood counters are an ideal location to distribute the brochure while consumers wait for their orders. This brochure could also be provided to the food service sector.***
- ✓ ***The Salmon Council needs to develop brochure(s) with easy-to-prepare grilling recipes. The recipes or cooking tips could include encouragement to prepare extra grilled salmon; the leftover fish can be used in a quick salad or pasta dish. Baking recipes could be offered as being something different. A brief review of the health benefits should be included. The brochure should be distributed through wholesalers at seafood counters.***

The Salmon Council could investigate partnering on these brochures with California-based specialty food companies that market marinades and sauces, such as Napa Valley Kitchens, Earth and Vine Provisions and Annie Chun's.

- ✓ ***The Salmon Council needs to work with wholesalers to ensure that California King salmon is available during the season at grocery stores in affluent areas, particularly Mollie Stone's, Whole Foods, Draeger's, Andronico's, Woodlands Market, Crystal Springs Fish Market, Lundardi's and select Safeway stores in the Bay Area. The wholesalers should be supplied with brochures to be distributed during deliveries.***
- ✓ ***The Salmon Council's website should be enhanced with the information provided in its brochures—namely, the fishery, easy-to-prepare recipes, cooking tips and health benefits. The fishery should be described in detail, and the freshness of the fish should be emphasized.***
- ✓ ***The Salmon Council can raise awareness of the differences between California King salmon and farmed salmon by capitalizing on its favorable review from the Monterey Bay Aquarium. It should seek reviews from the Audubon Society and other environmental organizations. The Chefs Collaborative is developing a "Good Fish" list with support from the Packard Foundation and the Pacific Coast Fishermen's Federated Association's Institute for Fishery Resources has also requested funding from the Pew Foundation to develop a "Good Fish" list.***
- ✓ ***The fact that consumers preferred California King salmon over Alaska King salmon and farmed salmon because of its freshness should be promoted to wholesalers and grocery fish buyers, especially before the opening of the 2001 California salmon season.***
- ✓ ***The Salmon Council needs to promote its brand to white tablecloth restaurants. The Salmon Council should distribute its fishery brochure through wholesalers and chef organizations (such as Chefs Collaborative). Customized metal gill tags, with the Salmon Council logo and fishing vessel name, would be ideal for promoting the "brand name" with wholesalers and chefs, and distinguishing it from farmed salmon.***

APPENDIX C

FISHERMEN & TRADE CUSTOMERS INTERVIEWED

<u>TYPE</u>	<u>FIRM</u>	<u>NAME</u>	<u>PHONE</u>	<u>CITY</u>
	Fisherman	Boos, George	707 875 2687	Bodega Bay
	Fisherman	Doll, Walt	408 251 6131	San Jose
	Fisherman	Fossmark, Kathy	831 373 5238	Moss Landing
	Fisherman	Harris, Milt	707 829 7979	Bodega Bay
	Fisherman	Hart, Tom	831 338 2408	Boulder Creek
	Fisherman	Hill, Kenny	510 865 0933	Alameda
	Fisherman	MacLean, Duncan	650 726 1373	El Granada
	Fisherman	Miyamura, Larry	916 927 4109	Sacramento
	Fisherman	Parravano, Pietro	650 726 1607	Half Moon Bay
	Fisherman	Stickel, Barbara & Tom	650 207 1238	Moss Beach
	Fisherman	Stiller, Mike	831 688 7883	Aptos
	Fisherman	Wise, Chuck	707 875 3897	Bodega Bay
Restaurant	A Sabella's	Rodrigues, Antonio	415 771 6775	San Francisco
Restaurant	Canlis	Atkinson, Greg	206 298 9550	Seattle
Restaurant	Chart House	Carr, Michael	312 266 1100	Chicago
Restaurant	CIA-NewYork	Clark, Corky	914 452 9600	New York
Restaurant	CIA-NewYork	Santoro, Steve	914 452 9600	New York
Restaurant	Farallon Fisheries	Coburn, Aiden	650 583 3474	SSF
Restaurant	Flea Street & Chefs' Collaborative	Cool, Jesse	650 424 0244	Palo Alto
Restaurant	King's Seafood	Matt Stein	562 437 8824	Long Beach
Restaurant	McCormick & Schmidt	Chris Westcott	206 762 4418	Seattle
Restaurant	Oceana	Schenk, Michael	212 759 5941	New York
Restaurant	Paragary's	Spataro, Kurt	916 452 3335	Sacramento
Restaurant	Phil's Fish	diGirolamo, Phil	831 633 2152	Moss Landing
Restaurant	Scoma's	Bennett, Kelly	415 771 4383	San Francisco
Restaurant	Scott's Seafood	Paci, Tony	415 982 3819	San Francisco
Restaurant	Shadowbrook	Burke, Ted	831 475 1222	Capitola
Restaurant	Spenger's	Smith, Stuart	510 846 7771	Berkeley
Grocery	Andronicos	Cain, Mark	510 524 2631	Albany

Grocery	Berkeley Bowl	Iijima, Ted	510 843 6929	Berkeley
Grocery	Bristol Farms	Kitagawa, Bob	310 726 1300	x1422
Grocery	Cosentino's	Gallmeister, Dan	408 377 6661	San Jose
Grocery	Draegers	Alfredo	650 685 3700	SanMateo
Grocery	Gelson's	Vitale, John	818 906 5727	Encino
Grocery	Henry's Marketplace	Dreshner, Vince	619 258 2900,x752	
Grocery	Lunardis	Bruno, Mark	408 265 9101	LosGatos
Grocery	Mollie Stones	Drobatz, Bob	415 461 1164	Greenbrae
Grocery	Raleys/BelAir	Inch, Sharon	916 373 3333	WestSac
Grocery	Safeway	Hampton, Ron	925 467 2295	Pleasanton
Grocery	Safeway	Franzblau,Jeff	303 843 7782	Denver Sfy corp
Grocery	Thriftways	Cavanaugh, Rick	206 783 7922	Seattle
Grocery	Von's	Bravo, Phil	626 821 7000	El Monte
Grocery	WholeFoods	Crini, Dave	415 270 0612 p	NoCal
Grocery	WholeFoods	Jones, Dick	415 431 6777	NoCal
Grocery	WholeFoods	Aupperly, Tim	818 501 8484	SoCal
Grocery	WildOats	Gingerich, Paul	303 440 5220x230	Boulder, CO
Grocery	WildOats	Jackson, Nate	916 481 1955Sac	Sacto
Receiver	3 Captains	Furtado, Larry	650 728 3111	Pilar Pt
Receiver	Bay Fresh	Whitney, Roger	831 633 5160	Moss Landing
Receiver	Caito Fisheries	Caito, Jim	707 964-6368	Ft Bragg
Receiver	Caito Fisheries	Caito, John	415 441 2121	San Francisco
Receiver	Central Coast Seafoods	diGarimore,Giovanni	805 772 1276	MorroBay
Receiver	Del Mar	Cappuccio, Joe	562 628 1800	Long Beach
Receiver	Driscoll	John	805 771 8000	MorroBay
Receiver	ExclusiveFresh	Bruno, Phil	650 728 7321	El Granada
Receiver	Lucas Wharf	Besse, Ed	707 875 3522	Bodega Bay
Receiver	Monterey Fish	Anthony	831 394 1442	SandCity
Receiver	Monterey Fish	Tringoli,Sal M	831 755 1920	SandCity
Receiver	Morgan Fish	Morgan, John	415 441 4495	San Francisco
Receiver	MorningStar	Mallory, Dave	650 728 3729	Princeton
Receiver	Old Port	Barry	805 595 9456	Avila Bay
Receiver	Royal Seafood	Pennesi, Joe (Papa)	831 373 7920	Monterey
	Pillar Pt Harbormaster Seafood	Grinnell, Peter	650 726 4723	Pillar Pt
	TrendsNews	Talley, Ken	206 523 2280	Seattle

Smoker	Dave'sGourmet Albacore	Greenberger,Dave	831 475 5847	Capitola
Smoker	La Rocca's Seafood	LaRocca, Rick	650 728 7850	Half Moon Bay
Wholesaler	American Seafood	Praeger, Mark	213 612 0350	LA
Wholesaler	Anderson	Oliphant, Karl	714 777 7100	LA
Wholesaler	Cal Shellfish	Amundsen, Richard	415 775 9241	San Francisco
Wholesaler	Costarella's	Costarella, Bob	415 674-0175	
Wholesaler	Fresh Fish	Tim	415 777 5900	SF
Wholesaler	Gentry	Gentry, Jackson	650 208 3535	Pillar Pt
Wholesaler	H&N	Jacobsen, Kurt	415 641 6333	San Francisco
Wholesaler	HarborTrading	Mauney,Jim	805 528 7070	Los Osos
Wholesaler	Hemingway Seafood	Casey/Sam	916 373 0202	WestSac
Wholesaler	LaRoccas	LaRocca, Nick	415 771 4134	SF
Wholesaler	Lusamerica Foods	Silva, John	408 294 6622	San Jose
Wholesaler	Martin Intl.	Martin, Richard	617 330 1202	Boston
Wholesaler	Nagle, Charlie	Nagle, Charlie	617 542 9418	Boston
Wholesaler	Ocean Crystal	Edison, Pete	800 462 5547	Portland
Wholesaler	PacificFresh	George	916 419 5500	Sacramento
Wholesaler	PacificFresh	Jones, Bill	425 740 5126	Seattle
Wholesaler	Pinnacle	Dean, Guy	604 255 7991	Vancouver, BC
Wholesaler	San Francisco Trading	Shig or Tsugi	510 483 0444	San Leandro
Wholesaler	Santa Monica Seafood	Pryor, Dan	310 451 8844	SantaMonica
Wholesaler	Seafood Supllier	Dawson, Bill	800 686 1900	San Francisco
Wholesaler	SeaProdCoop	Jeff	360 733 0120	Bellingham
Wholesaler	SeaProdCoop	Sigfusson, Curt	360 733 0120	Bellingham
Wholesaler	Stagnaro	David/John S.	831 423 1188	SantaCruz
Wholesaler	Survival II	Reuter, Larry	408 227 5296	
Wholesaler	Vince's	Chris	650 589 5385	SanBruno

APPENDIX D

SUMMARY OF *NATURE* ARTICLE

Naylor, Rosamond L., Goldberg, Rebecca J., Primavera, Jurgenne H., Kautsky, Nils, Beveridge, Malcolm C.M., Clay, Jason, Folke, Carl, Lubchenco, Jane, Mooney, Harold, and Troell, Max. "Effect of aquaculture on world fish supplies," *Nature*, 405(June 29, 2000): 1017-1024.

Fish farming is thought by many to relieve pressure on ocean fisheries. However, a recent review article in *Nature* suggests otherwise. While reviewing the impacts of aquaculture of various species, the authors identified three main negative impacts caused by salmon farming. Public and private interests must work together to reduce the external costs generated by aquaculture.

Farmed fish compete for food sources with wild fish. Fish meal and fish oil are the dominant ingredients in farmed salmon feed. "These two ingredients supply essential amino acids that are deficient in plant proteins and fatty acids not found in vegetable oils. These also provide energy, which is important because fish tend to convert carbohydrates to energy inefficiently." (p. 1018). In the case farmed salmon, 3.16 pounds of fish biomass is needed for feed to produce a pound of farmed salmon. Some carnivorous farmed species are even less feed efficient.

Aquaculture also poses the danger of biological pollution. "Atlantic salmon—the dominant salmon species farmed—frequently escape from net pens. As much as 40% of Atlantic salmon caught by fishermen in areas of the North Atlantic Ocean are of farmed origin. In the north Pacific Ocean, over 255,000 Atlantic salmon have reportedly escaped since the early 1980s and are caught by fishing vessels from Washington to Alaska. Increasing evidence suggests that farm escapees may hybridize with and alter the genetic makeup of wild populations of Atlantic salmon which are genetically adapted to their natal spawning grounds. Such genetic alterations could exacerbate the decline in many locally endangered populations of wild Atlantic salmon.

Movement of stocks for aquaculture purposes can also increase the risk of spreading pathogens. In Europe, serious epidemics of furunculosis and *Gyrodactylus salaris* in stocks of Atlantic salmon have been linked to movements of fish for aquaculture and restocking." (p. 1021).

In order to reduce these negative impacts, the authors recommend that the aquaculture industry adopt new priorities, including: (1) the reduction of fish meals and fish oil inputs in feed; and (2) development of integrated farming systems. Because vegetable proteins have inappropriate amino-acid balance and poor protein digestibility for carnivorous species such as salmon, inclusion of meat byproducts can help overcome this problem. "Integrated systems can be used to reduce effluents, diversify products and increase productivity. Several studies show that seaweed and mussels grow well in wastewater from intensive and semi-intensive systems...For example, in Chile salmon can be farmed with *Gracilaria chilensis* (a red alga) that removes large amounts of dissolved nitrogen and phosphorous wastes from salmon cages. The effluent output from salmon farming is used to produce a seaweed crop, and the added revenue from the sale of the seaweed more than pays for the extra infrastructure needed for the integrated system." (p. 1022).