# QUALITY OF RAINBOW TROUT IN THE MARKETPLACE: THE PROBLEM AND A SOLUTION

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During the past years, producers of rainbow trout products for the commercial market in America and abroad have become increasingly concerned about the quality of their products in the marketplace. Much of this interest has been spawned (no pun intended) by some not-so-very-complementary articles in the newsmedia such as the New York Times and Consumer Reports about the quality of fish and shellfish in the marketplace. In a couple of these articles, the quality of farmed rainbow trout has been addressed specifically.

During the 1986 meeting of the California Aquaculture Association, several corporate executive chefs and restauranteurs identified their expectations of farmed fish products - especially rainbow trout products. The expectations were - in order of priority:

1. High quality; i.e., the product was handled throughout the processing and distribution chain to preserve the highest quality;

2. Timeliness; i.e., the product was available when it was needed;

3. Portion control; i.e., the product was the size required by the purchaser.

In none of the presentations was price identified as one of the criteria.

The results of a limited survey of distributors and retailers of rainbow trout products in the U.S. published by McCain and Guenthner in 1991 identified much the same expectations as those expressed during the 1986 meeting.

The agenda of the 1993 U.S. Trout Farmers Association annual meeting contained several presentations addressing the product quality issue.

Thus it appears, on the surface of it at least, that there is a concern about there being a real or potential problem with product quality in the marketplace. It is this aspect I will address.

When a chef or homemaker purchases a fresh or frozen rainbow trout and it is of questionable or obvious poor quality, who gets blamed? In the majority of cases it is the producer/processor because their logo and/or name is on the package label. In my opinion, this is laying the blame on the wrong individuals. The product undoubtedly left the processing plant in a

state of high quality. However, during the distribution process, attention to preserving quality diminished.

Question: How many freeze-thaw cycles do these fish pass through?

Question: How many days or weeks elapse between processing and sales?

Question: How many days does the product remain in the retail market waiting to be sold?

I think these questions have but one collective answer: **TOO MANY!**

Coming somewhat full-circle, the quality assurance programs I have seen being considered concentrate, for the most part, on preserving quality during the production and processing phases of getting the product to a consumer, with literally no consideration of what happens (or could happen) during the distribution chain. I think there should be considerations by the industry to insure the preservation of quality through the entire production, processing and distribution chain. The producer/processor can be proactive in this area to work with those involved with the distribution of farmed fish products. I think there are several individual courses of action possible with no single one capable of covering all bases.

First, establish a regional (state or provincial) logo to be placed upon each package of farmed fish product. This would indicate assurance of adherence to an established quality control program. The British Trout Association put such into practice several years ago and it has been very successful in the eyes of the consumer. This approach has been practiced by the beef, pork, and poultry industries for years as a means of promoting an industry and quality assurance.

Second, each package should have "Pull By" and/or "Sell By" dates before it leaves the processing plant. Currently, "Pull By" and/or "Sell By" dates are assigned in the marketplace in accordance with the store policy of shelf-life expectations from the date of receiving the product. What is not known is how long was the period of time between the product leaving the processor and being received in the retail market.

Third, there should be some mechanism for people; e.g., people not satisfied with the quality of their purchase, to register their concern(s) and to receive some degree of satisfaction. Unlike beef or poultry, a less-then-desirable quality of fish often means a loss of future purchases by the affected customer.

Fourth, a wider variety of value-added products should be developed and test marketed. Such products could include those which are complete meals in a microwavable or double-boiler bag. A German trout processor several years ago developed a similar product line which required no refrigeration/freezing and did not contain preservatives. They were packed under nitrogen and had a shelf-life of 18 months. Their flavor, in my opinion, was not identical to that of a similar

freshly prepared meal, but was quite acceptable.

The case for value-added items is strong. According to the information available from various sources, of the daily meals prepared in the U.S. (some 750 million, give or take a million or so), 70% contain one or more value-added items. Of these, 50% are taken outside the home in restaurants, public and private schools, airlines, hospitals, and such. In addition, the number of "two-worker" families is increasing, so preparation of traditional evening meals in these cases often is replaced by eating out or easily prepared meals in the home. It would seem that the trout industry could capture an increased share of this market by some innovative food technology and marketing. In this regard, I am not suggesting that current processors enter this area, but be quite supportive of those who do. There should be no detrimental competition with the fresh/frozen product lines.

Fifth, to ensure as long a shelf-life as possible the quality control of the product must begin early in the production phase. At regular intervals, the producer should monitor the evisceration loss, the flesh texture, color and taste, and the general appearance of the fish. During the 7-10 day period before the fish are sent off for processing they should be in a clean-water situation and not fed. This depuration practice will accomplish at least five product-enhancing features:

1. Increases flesh firmness by reducing the intramuscular fat content.

2. Reduces the oxidative rancidity potential by reducing the intramuscular fat content.

3. Decreases the flesh contamination potential from the GI tract during processing.

4. Decreases the evisceration loss.

5. Reduces the flesh off-flavor the fish may have acquired from the pond water conditions.

During the depuration process, there will be some weight loss - how much should be determined by the individual producer. Nonetheless, the weight loss will be more than offset by the increased product quality.

In closing, in today's market climate, rainbow trout products can easily be lost in the shuffle through bad publicity about quality. The industry is not large and, in America, many members are not very proactive about their industry until push comes to shove. This "brush fire fighting" approach should be minimized - especially where product quality is concerned. My final suggestion is for producers and processors to try the solution processes I described and judge for themselves whether there is benefit or not. I know personally of trout producers in Europe who have adopted these suggestions - and others - and are quite happy with them.