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Words are powerful. Can a name change make a difference?

by Bill Mancini

Humans are inexorably tied to our use of spoken language. It's one of our characteristics that separate us generally from other animals.

We can convey to other people very complex concepts simply by uttering a few choice words and phrases, assuming of course the receiver has learned and understands the same language as the speaker.

The complexity of this capability goes even further. For example, diplomats understand very clearly the power of the spoken and written word, and must be very careful about how they construct a phrase or concept.

Even then, the meaning of the words can be misinterpreted, depending on the context in which those words are presented, and the life experience and background of the receiver.

Most will agree, language can be quite a minefield!

Some, if not most, topics within the discipline of aquaculture are not immune from linguistic pitfalls.

Take the subject of genetically modified organisms, or GMOs. Utter this term to one hundred people and you will get a whole spectrum of reactions.

Some people don't understand the term, some are repulsed by the concept, and some are perfectly comfortable with it.

A whole collection of other interpretations and reactions exist as well.

This reality has led to what I see as an interesting development.

AquaBounty Technologies, the developer of the first animal GMO (the AquAdvantage salmon), is now asking all of us to refer to their fish as "precision bred," as opposed to genetically modified or a GMO.

This move was, I think, precipitated by the power of words, and the term GMO becoming in a figurative sense “radioactive.”

In the minds of many consumers, GMO conjures up horrible images of genetic technology run amok, and a significant threat to our well-being as a society.

This attitude is by no means universal, but is prevalent enough, and the term is polarizing enough, to be a concern for anyone daring to move genetic technology forward.

In a society today where we are directly or indirectly trained to be polarized with respect to other aspects of life (politics, for example), we should not necessarily be surprised by this development.

So, what is the future of the AquaAdvantage salmon and other precision-bred organisms?

Time will tell, as it will for other approaches to genetic manipulation such as CRISPR, or more precisely, the CRISPR Cas9 system.

This approach to gene editing differs from the approach taken by AquaBounty in that genes from other organisms are not transferred to the target species from a host species.

Instead, gene editing is accomplished within the target’s own genome.

Is this a more acceptable form of genetic manipulation for those who abhor taking genes from one species and transferring them to another?

Again, time will tell.

Whether these technologies bother you or not, the genie is out of the bottle—Pandora’s Box is open—use whatever metaphor you like.

History is the best teacher here and tells us that putting the genie back into the bottle (if we so choose) simply is not possible.

As I have stated in previous editorials, I believe genetic technologies as applied to aquaculture can be tremendous tools for good.

Opportunities for abuse do exist.

If my imagination were wilder, I suppose I could come up with an example.

But, there is no functional difference that anyone has explained to me between what occurs during a manipulation using CRISPR Cas9 and “good old-fashioned trait selection through multiple generations.”

CRISPR Cas9 simply takes much less time and is orders of magnitude more efficient.

With regard to the AquAdvantage salmon, extensive studies have shown no discernable risk to human health and consumers (with safeguards in place to protect wild fish), and multiple government agencies agree, including the US Food and Drug Administration.

“Precision breeding,” regardless of the details or application, may now be a part of our lexicon.

We will see if it sticks.

Bill Mancini is president of Fisheries Technology Associates, Inc., a Fort Collins, Colorado-based aquaculture, aquaponics, and fisheries consulting firm. He may be reached at 970-225-0150 or <mancini@ftai.com>.