

August 2016—AQUACULTURE PERSPECTIVES

Copyright © 2016 Fisheries Technology Associates, Inc. All rights reserved. Copying and distributing or reprinting for purposes of resale without expressed permission of the author is prohibited.

Aquaculture's objective: change the world

by Bill Mancini

I was channel surfing last weekend and came upon a CBS news feature about Bill Nye, The Science Guy.

Bill has been a fixture on educational television for decades, and makes it his job to get young people (for that matter, anyone who may be watching) excited about science, technology, engineering, and math—what, today, we call STEM.

He does a great job of it, especially someone who is a professed geek, bowtie and all.

When this Cornell-educated engineer first got started in his current pursuit, he decided to codify his new role in writing. Among other things, he wrote, "Objective: Change the world."

During his interview, he was asked why he chose that objective. His answer was simple and straightforward. "If you don't set out to change the world, then why bother?"

That simple phrase resonated with me. Indeed, the most elegant and profound concepts and statements usually are quite basic and simple.

Whether we knew it at the time of its development or not, aquaculture has indeed changed the world. I think we all had hopes it would and believed it would (I fall into that category), but we were unsure until aquaculture blossomed into the food-production powerhouse it is today.

When aquaculture reached its "critical mass" is a subject for debate. When did we "arrive?" When did aquaculture emerge from its infancy into adulthood?

I suppose that's all a matter of definition, because aquaculture continues to grow—rapidly—and will continue to grow and mature as the technology grows and changes. In aquaculture, there is no such thing as steady state.

Long after you and I leave aquaculture, it will morph into something that may be difficult to imagine or comprehend—sort of like the Wright brothers envisioning a Mach-10 space shuttle, landing at Cape Canaveral after reentering the atmosphere.

Unless you have a very vivid imagination and a great sense of technological progress, knowing what the future will bring to aquaculture 50 or 100 years from now is quite daunting.

By necessity (by that I mean, how will we feed 16 or 20 billion people), aquaculture will look very different from the way it looks today.

We will see systems and approaches that boggle the mind. We will culture species that have yet to be considered, and do it in ways that are highly sustainable and conserve resources.

As our understanding of molecular biology and genetics continues to grow, diseases will become far less common, or at least far less challenging.

We will continue to find real partners in the bacteria, algae, and other microorganisms that surround us, both as soldiers in the fight against pathogens, and as sources of proteins and other ingredients of feeds.

Aquaculture systems will get larger and smaller at the same time. Grandiose facilities will take shape, but individualized microsystems will flourish and multiply by the millions.

So-called “vertical integrated farms” will abound within our midst, with a very small physical and carbon footprint. Locally produced fare will be the norm.

Other farms and the technology they will hold are beyond my current comprehension...and that just scratches the surface.

But I know this for sure. If not for aquaculture, the world we live in today and the world of tomorrow would be far less secure and far more challenging from a food-security perspective.

People invented aquaculture and brought it to its current state of development. If we had this conversation about aquaculture with Bill Nye, I think he would be proud of all of us.

In a very real sense, we have changed the world.

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>.