

Deep-Dive into the Catfish Genome



The humble catfish has fed Americans for hundreds of years, and farmed catfish is one of the five most eaten seafoods in the United States. In fact, President Ronald Reagan established **June 25** as **National Catfish Day** for Americans to celebrate “**the value of farm-raised catfish.**”

Because of its popularity, farmers are always searching for ways to improve catfish production quantity and quality. ARS scientists in the Warmwater Aquaculture Research Unit in Stoneville, MS, have focused on the selective breeding of catfish broodstock and have used their knowledge of the catfish genome to more efficiently identify and select fish that grow faster and have more meat.

By using the genome as an instruction manual of sorts, they found combinations of DNA sequence variations that were detected in fish that grew faster and put on more muscle. Researchers have selectively bred fish with this genetic content to improve catfish growth rate, meat quality, and farm yield.

Over the past decade, ARS scientists have collaborated with U.S. catfish farmers to create new, improved catfish lines. These lines should improve catfish production and quality, and further increase catfish’s dominance of U.S. Aquaculture production, which accounted for sales of more than \$367 million alone in 2018.

