



The collection of Florida bass fingerlings begins with the draining of the holding ponds where the fish have been growing for a month. Each of the Durant State Fish Hatchery's ponds was stocked with 80,000 fingerlings.

This Stock Pays Whopping Dividends

Investment in Florida Bass Production Making Monsters for Oklahoma Anglers



An In-Depth Look at How Genetics From Florida Produce Largemouth Lunkers in Oklahoma

EDITOR'S NOTE: This is the final article in a series detailing efforts of the Oklahoma Department of Wildlife Conservation to produce trophy largemouth bass in Oklahoma's waters.

By Don P. Brown, Information and Education Specialist

It's almost June, and the investment in producing future monster bass has "reached maturity." The time has come to cash in on the dividends, which the Oklahoma Department of Wildlife Conservation is eager to distribute to the anglers of Oklahoma.

The Department's Florida bass program is a long-term investment, made year after year, to give anglers a future chance at catching the next state-record largemouth bass.

The immediate payoff comes in the form of hundreds of thousands of bass fry produced this past spring by the dedicated Fisheries Division workers at the Durant State Fish Hatchery under the expert guidance of program supervisor Ike McKay. The fry were produced from brooder fish that were certified as genetically pure, and they have become fingerlings that will now be used to stock selected lakes throughout the state.

“Just like any crop being raised, there are good years and bad years,” said Cliff Sager, senior fisheries biologist for the Wildlife Department’s South Central Region. This year proved to be a good year, the second-best on record, with about 1.8 million Florida bass fry produced.

“The numbers have been high. It’s the same problem we’ve had the last couple of years. But it’s a good ‘problem’ to have: We’ve got too many bass!”

The Wildlife Department began stocking bass with Florida genetics into state waters in the early 1970s. The genetic makeup of these Florida largemouth bass allows them to grow bigger and faster than the northern largemouth, which is native to Oklahoma waters. Since 1979, every Oklahoma state-record largemouth bass except one has tested positive for Florida genes.

Sager said this year’s fry production success means a few more lakes will receive Florida bass stockings than might otherwise have been possible.

IT’S FINALLY TIME

The process of stocking the Florida bass fingerlings occurs over a three-day period in late May or early June. The timing depends on careful observation of the hatchery ponds. Each 1-acre pond holds about 80,000 fry. All of these small fish rely on a diet of plankton to grow to fingerling size, about 1.5 inches in length.

“As they get bigger, they start running out of plankton,” Sager said, “and they can literally eat themselves out of house and home.” As plankton gets scarce, the fingerlings will either begin to get skinny, or they will begin to eat each other. That’s



Durant Hatchery technicians Luke Taylor, Joe Williams and Robert Wichers collect bass fingerlings for weighing and transfer to a hatchery truck for transport.



Fisheries intern Mason Eddings pours a bucket full of bass fingerlings into a hatchery truck. Once loaded with the proper number of fish, the truck will make the trip to one of the lakes designated for stocking.





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A hatchery truck meets the stocking boat waiting at Lake of the Arbuckles. A flexible pipe is used to transfer the bass fingerlings to a holding tank on the boat. This process reduces stress on the fish by keeping them in water the entire time.

the time to harvest them for stocking.

In the weeks leading up to the stocking operation, a comprehensive plan is mapped out so things will run like clockwork in rapid fashion. Florida bass are not the hardiest fish in the world, Sager said. They don't do well with excessive handling or with temperature changes. Getting them off the hatchery and into lakes in short order is one way to increase survival.

"We've really made a lot of strides and focused a lot of our attention on making sure that we're stocking good, healthy fish," he said. The only time the fingerlings are out of water is for a brief moment when they are netted from the hatchery basin into a bucket of water to be moved to a hatchery truck. "They remain in the water from the truck to the stocking boat and then to the lake."

On the first stocking day, trucks with large holding tanks begin lining up at the Durant hatchery. The ponds are drained through concrete basins where the fingerlings collect. Hatchery technicians use rubber nets to dip hundreds of bass fingerlings at a time into buckets of water. Each bucket is weighed to

track the number of fingerlings being transferred into each truck based on its destination. About 750 fingerlings will weigh one pound.

WHERE, OH WHERE?

The hatchery trucks, once loaded with the scheduled number of fingerlings, take off to their stocking destinations. But



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As a top-tier lake on the stocking list, Lake of the Arbuckles will receive a total of 90,000 Florida largemouth bass. Fisheries workers will load 30,000 fingerlings at a time into the boat, which will make three trips to various areas of the lake to release the fish.

the destinations are not just any lake anywhere in the state. There's a method to making monsters!

Biologists have determined that temperature-sensitive Florida bass are at the extreme northern edge of their survival range in Oklahoma. In general, the southern half of Oklahoma is where Florida bass are able to survive year-round, reproduce and grow. To get the most return on investment, the Wildlife Department wants to concentrate Florida bass stocking efforts in those lakes that offer the best chances to produce trophy bass.

In choosing stocking sites, three criteria are considered, Sager said. First, does the lake have a history of producing trophy bass – fish that weigh more than 8 pounds? Second, how persistent is the Florida genetics within a lake's bass population? Third, does the site have a climate that affords bass the longest-possible growing season?

Sager said 47 lakes made the list of possible Florida bass stocking sites. The overall list is then divided into three tiers, based on the more subjective observations of fisheries biologists across the state. "In the long run, we don't know the entire recipe that goes into making a trophy bass lake. But we do know those places where it has been successful," Sager said.

Five lakes are considered top-tier Florida bass stocking sites: Sardis, McGee Creek, Broken Bow, Murray and Lake of the Arbuckles. In all criteria, these five lakes rank the



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The boat carrying 30,000 Florida bass fingerlings heads out to one of three stocking locations at Lake of the Arbuckles.



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Senior biologist Cliff Sager lifts the gate to release fish from the boat's holding tank as technician David Routledge and intern Lane Scogin monitor the mesh cage to ensure the fingerlings are contained and protected.

highest for trophy bass success, and each lake is stocked with Florida bass fingerlings annually.

The second tier includes about 20 lakes. Based on the fingerling production, these lakes are stocked once every two or three years on a rotating basis.

The third-tier lakes are those that might have some potential, but their ability to produce trophy bass is lower. Any fry or fingerlings that are considered excess production (for example, the thousands of fry left over after all the growing ponds have been filled at the hatchery) will be stocked into these lakes, which gives them a chance to produce a monster bass.

CLASS DISMISSED

One of the hatchery trucks pulled onto the highway and headed toward Lake of the Arbuckles. As one of the top-tier lakes, Arbuckle will receive 90,000 Florida bass fingerlings. Sager said recent research has shown that stocking rates have likely been too high in recent years, as there is evidence that when too many fish are placed in one area, survival suffers. “We’ve actually lowered the number of fish we’re stocking in any one area, but we feel it’s going to have a good effect,” he said.

“We’re trying to be more efficient in our stockings and use our Florida bass resources more effectively within each lake and also throughout the state.”

So, three places around the lake are selected, and the fingerlings are taken by boat 30,000 at a time to each spot for stocking. A long, flexible tube is used to move fingerlings from the truck tank into a holding tank on the stocking boat. Within minutes, the boat and its 30,000 or so passengers are on their way to the release spot.

The water at the release site is about 3 or 4 feet deep. Fisheries technicians place a 6-foot circular mesh cage into the lake, and then the 30,000 fingerlings are drained into the mesh cage in the lake. The cage is used to protect the fingerlings as they adjust to the water temperature and water quality of their new home.

“We want them to get oriented,” Sager said. “We want them to start schooling up and displaying some predator avoidance.”

Within 5 or 10 minutes, the large cloud of fingerlings can be seen splitting apart into separate schools, a survival strategy. Once that happens, it’s time to lift the cage. As the thousands of small Florida bass slowly float away, it’s not hard to imagine that someday perhaps 10 years from now, one of those fingerlings is going to appear in a photo as Oklahoma’s newest state-record monster bass. 🐟

(The “Making Monsters!” magazine series has a companion television show. Go online to the “Outdoor Oklahoma” channel on Youtube to watch the episode detailing the Florida largemouth bass production program from start to finish!)



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Fisheries technician David Routledge watches the Florida largemouth fingerlings inside the mesh cage as they acclimate to their new home in Lake of the Arbuckles. Once the small fish begin showing schooling behavior, the cage is lifted and thousands of potential state-record bass begin swimming away.