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# Product moves slowly but traffic in turtles brisk

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BALCH — The solid metal fences surrounding Marcus Balch's turtle ponds are your first tip that his farm is not a run-of-the-mill aquaculture operation.

"Everything about turtles is different," said Balch, who — along with son Scott — operates Northeast Arkansas Turtle Farm in eastern Jackson County.

The farm produces mainly red-eared sliders, common snapping turtles and spiny softshell turtles for sale as pets and as food, Balch said. Almost all the turtles are shipped by air from Little Rock in cardboard boxes, destined for brokers in the United States, Mexico, Europe and China, he said.

Balch, who operates eight turtle ponds and is building two more, was one of 19 Arkansans who bought an aquatic turtle breeder (farmer ) permit from the Arkansas Game and Fish Commission during the fiscal year that ended June 30.

In 2005, when the U. S. Department of Agriculture prepared its most recent Census of Aquaculture, only 99 turtle farms were counted nationwide in 12 states — 71 of them in Louisiana, five each in Florida and Iowa, and three each in Arkansas and Alabama.

Louisiana, which leads the nation in turtle production, had 62 turtle farms in 2007 that produced 10. 45 million turtles worth $ 6. 27 million, according to Louisiana State University's AgCenter. Louisiana's turtle farms are concentrated south of Baton Rouge and east of Alexandria, said Greg Lutz, a specialist with the AgCenter's Aquaculture Research Station in Baton Rouge.

Turtles are relatively simple to raise, Lutz said.

"They're a little skittish. So, if you establish a new pond, it may take one or two years for them to really begin to lay their eggs reliably," he said.

In 1975, the U. S. Food and Drug Administration banned the sale or distribution of turtles with shells that measure less than 4 inches long because of concerns about the transmission of salmonella. Louisiana requires all hatchlings to be tested and certified salmonella-free, Lutz said.

Most Arkansas turtle farms have relatively small ponds, about one-half acre or less, stocked with about 10, 000 turtles, said George Selden, a Newport-based aquaculture specialist with the University of Arkansas at Pine Bluff's Aquaculture / Fisheries Center.

Unlike catfish ponds, turtle ponds don't require aerators because turtles are air breathers, Selden said. Turtles also don't require as much food as do catfish, because most turtles are omnivores that supplement their diets with naturally occurring plants

and animals, he said.

One of the greatest challenges in farming turtles successfully is navigating the “very tricky market,” much of which is overseas, Selden said. For that reason, turtle farming is probably more like baitfish farming, “in which you have to establish relationships with individual clients,” he said.

Balch, who has raised baitfish for about 30 years, branched out into turtles six years ago. The new business is particularly labor intensive during the nesting season, he said.

From mid-May to mid-August, three employees and everyone in the extended Balch family stay busy collecting turtle eggs. The eggs are washed, dried and set in incubation trays that contain a bed of moist vermiculite and moss.

The eggs, which must not be turned on their long axis when removed from the nest, take 60-90 days to hatch, Balch said. During incubation, they’re kept in a carefully controlled environment that’s warm and humid, he said. Incubation temperature determines the turtles’ sex, with females produced in cooler temperatures and males produced in warmer temperatures. Like most turtle farmers, Balch supplements his own production by buying wild-caught turtles.

TURTLE REGULATIONS Fourteen aquatic turtle species are found in Arkansas, said Kelly Irwin, state herpetologist with the Arkansas Game and Fish Commission. Historically, wild turtle harvests were completely unregulated, he said. The first major change came in 1993, when the commission prohibited the taking of alligator snapping turtles, a species that takes up to 14 years to reach sexual maturity.

In 2004, the agency began gathering turtle harvest data that was supplied on a voluntary basis. As of Jan. 1, 2006, reporting became mandatory and the taking of chicken turtles was prohibited because so little is known about the species.

“We began to gather base-line information, so that we could make informed management decisions down the road,” Irwin said.

During 2006, 158, 636 wild aquatic turtles were harvested in Arkansas, 77 percent of them red-eared sliders. The top five harvest counties were Mississippi, Arkansas, White, Lonoke and Jackson.

During the fiscal year that ended June 30, the Game and Fish Commission sold 100 aquatic turtle harvest permits, 77 helper permits, 3 junior permits and 16 dealer permits. In addition, tags were issued for 6, 311 turtle hoopnets and 445 box-type traps.

Wild turtles face a number of threats, including habitat loss, water pollution, road mortality and incidental take by fishermen. Saving aquatic habitat could have a significant impact on the health of turtle populations, said Stan Trauth, a zoology professor with Arkansas State University at Jonesboro and lead author of the 2004 book The Amphibians and Reptiles of Arkansas.

Turtle eggs and hatchlings also are highly susceptible to predation by raccoons, foxes and fire ants.

Because freshwater turtles are slow growing, breed late in life and have low reproductive

and survival rates, they are highly sensitive to over-harvesting, said Steve Dinkelacker, a biologist at the University of Central Arkansas in Conway who focuses on reptile research. Stable turtle populations depend on sufficient numbers of breeding adults to offset natural mortality and the impact of humans, he said.

Arkansas' current turtle regulations are a step in the right direction, Dinkelacker said.

"I would personally like to see a ban on exploitation of wild stocks, and I think the science supports it, but Arkansas-specific data is lacking," he said.

The Game and Fish Commission plans to review its aquaticturtle regulations after five years of harvest data have been collected, Irwin said.

"The trend is that most states have either severely restricted or closed entirely their aquatic turtle harvest," he said.

OTHER STATES "Mississippi closed the commercial harvest of their wildlife in 1992, across the board," Irwin said. Missouri and Tennessee have limited aquatic-turtle harvesting to small areas and a very few species, he said. Responding to concerns from a number of states about turtle exports to China, the United States in June 2006 added alligator snapping turtles and all map turtles to Appendix III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Also known as CITES, the convention is an international agreement that took effect in 1975 and now has 173 parties. The agreement aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. An Appendix III listing will help "ensure that the turtles being exported were taken legally under federal and state laws," said Robert Gabel, who works for the U. S. Fish and Wildlife Service in Arlington, Va.

Last year, the Texas Parks & Wildlife Department voted to end commercial turtle harvests in public waters and to limit harvests in private waters to just three species: red-eared sliders, common snapping turtles and softshell turtles.

Bob Popplewell, owner of the Brazos River Rattlesnake Ranch in Santo, Texas, west of Fort Worth, said the regulatory change cut the business of his turtle-harvesting cooperative in half.

"We had a pipeline going into Asian countries, especially China," said Popplewell, who has trained about 1, 400 Texans how to trap wild aquatic turtles.

Carl Franklin, curator of the Amphibian and Reptile Diversity Research Center at the University of Texas at Arlington, said he was disappointed that Texas' new regulations failed to do more to limit harvesting.

"I don't have any objection at all to people hunting or fishing or enjoying the outdoors; I love those activities as well. But people have to be conscientious about game management, and right now the dollar is winning out," said Franklin, author of the 2007 book Turtles: An Extraordinary Natural History 245 Million Years in the Making.

In March, the Tucson, Ariz.-based Center for Biological Diversity petitioned Florida, Georgia, Oklahoma and Texas to end freshwater turtle harvests, saying such harvests are unsustainable.

The center also said many of the wild turtles that are collected are contaminated with mercury, PCBs and pesticides. Because turtles live longer than fish, scientists say they bioaccumulate considerably greater amounts of aquatic contaminants.

In May, Oklahoma enacted a three-year moratorium on commercial turtle harvests from public waters. Interim regulatory changes are under way in Florida and Georgia, said Jeff Miller, a spokesman for the Center for Biological Diversity.