How to get Channel Catfish to Spawn in a Farm Pond

By Gordon Schomer, Durant State Fish Hatchery manager

Most Oklahoma fishermen have probably enjoyed fishing in one of Oklahoma’s more than 250,000 farm ponds. Besides bluegill or bass, channel catfish are one of the most sought after species by farm pond anglers. Not only are channel catfish relatively easy to catch, but once they’re given a “cornmeal and hot oil bath” they can keep anglers coming back time and again. Yep, fresh-fried catfish fillets complete with hushpuppies and cole slaw is a true Oklahoma delicacy.

For the farm pond owner, raising channel cats can be almost as fun as catching and eating them. With just a little basic knowledge of channel catfish biology, some general pond management skills and a few common items, you can easily raise a self-sustaining population of channel cats even in small ponds.

One factor to consider before raising catfish is will there be other species of fish in your farm pond. If bass, bluegill, crappie or other sunfish species are present, your level of success may be limited. Largemouth bass, bluegill and others will readily prey upon channel catfish eggs, fry and fingerlings, particularly when other food sources are less abundant. For this article, however, we will assume that channel catfish are the only species of fish in your farm pond. Spawning and rearing channel cats can still be attempted in ponds with other species present, however predation may inhibit your overall success.

Selecting the proper number, age, body condition and sex ratio of channel catfish brood stock to spawn in your pond is very important. Ideally, the farm pond owner would select a ratio of two females to one male or three females to two males of fish in good body condition, and at least three to four years old.

For recreational fishing purposes, farm pond owners should begin conservatively. Begin your operation with no more than 20 to 30 total brood fish (males and females combined) per surface acre of water. Due to the reproductive capabilities of channel cats, the pond owner needs to be able to harvest an adequate number of fish (either through angling or seining) each year to prevent overpopulation. A pond overpopulated with channel catfish is usually indicated by poor body condition; and if allowed to continue, will deter spawning and survival of juvenile fish. Proper harvest will take out an amount of adult fish equal to the amount of juveniles spawned each year.

Some of you may say, “how can you tell a male channel catfish from a female?” Generally the male has a much wider head than the female. This clue can be tough to judge for the beginner without comparing several same-sized fish. Also, the time of year has a lot to do with being able to visually look at them to tell “which is which.”

Channel catfish spawn in water temperatures between 72°F and 82°F. In Oklahoma this usually occurs in late May, June, and early July. When temperatures approach 72°F, males will develop pronounced muscles on their heads. The underside of the male’s chin will also turn darker and his lips will thicken. Overall, the male is darker than the female during the spawning season.

Female channel cats will be lighter in color, have a slender head without pronounced head muscles, the underside of her chin will not be dark and her belly will be well pronounced. Another helpful tip in determining the sex of channels is when you hold them for a visual inspection. Males will typically have a broader tail than females, making them easier to hold.

Once you select your brood stock and release them to your pond, you will need to put out spawning containers. Spawning containers can be anything from old metal milk cans or kegs, earthen/ceramic chimney pipe, fiberglass or plastic crocks or barrels. Even old water heaters can be used. Never use containers that have held PCB’s or other potentially harmful chemicals. The main thing is to pick something that both the male and female channel catfish can comfortably swim into at the same time to spawn and be able to get back out of easily. It helps to have one side of the container sealed off, allowing for one way in and one way out. One spawning container for every two to five spawning pairs of fish should be spaced out around the perimeter of the pond in about two to five feet of water. Face the open side of the container away from the bank towards deeper water. This helps to keep wave action from forcing mud or silt into the container. Get all the air out of the container before sinking it and to help you locate the container attach a small buoy to mark its location.

To see if your fish are spawning successfully, check the containers carefully every few days after placing them in the pond. Slowly lift the spawning container to the surface and visibly check for eggs or newly hatched fry. Depending on the water temperature the eggs will take anywhere from three to eight days to hatch. The male will typically stay near the eggs protecting them and keeping fresh circulated water to them until they hatch. Female channel catfish weighing about three to four pounds will typically lay about 4,000 eggs per pound of body weight and larger females about 3,000-3,500 eggs per pound of body weight.

Depending on how many brood fish spawn and how successful the hatch rate is, a tremendous amount of fry can be produced in a season. The farm pond owner must keep this in mind because in order to maintain a healthy pond with catchable sized fish, the pond cannot be allowed to get overpopulated.