

support most of the fishing, so care must be taken not to overharvest these fish.

Two to three years after stocking, a decision should be made as to what size fish are desired. Bass will have reproduced two or three times during this period, yielding an abundance of small young bass. If left unharvested, these young bass will grow slowly due to competition with each other, resulting in a bass population comprised primarily of fish less than 12 inches in length. These small bass will feed heavily upon the sunfish, controlling their number. Fewer sunfish will be available for harvest, but they will be of larger size (7 to 8 inches). The catch will thus consist of small bass and large sunfish.

If the pond owner is interested in harvesting bass larger than 15 inches in length and sunfish of a variety of sizes, then 12- to 15-inch bass should be released after the initial two to three years following stocking. Bass of this size grow rapidly, produce many young, and prey heavily upon intermediate-sized sunfish. About twenty-five 8- to 12-inch bass should be harvested per acre per year, along with any bass larger than 15 inches. Total bass harvest should not exceed 20 to 25 pounds per acre per year. A good rule of thumb is to also harvest 4 to 6 pounds of sunfish for every pound of bass harvested.

Catfish can be harvested at any rate desirable to the pond owner. A good record of catfish harvest should be kept, so that the catfish population can be maintained at a predetermined level by supplemental stocking of 8- to 12-inch fingerlings as needed. These catfish fingerlings must be stocked to prevent them from being eaten by bass.

Stock Assessment and Correction

If the fish have not been properly harvested, an adjustment of the fish populations may be required. If primarily 3- to 5-inch bluegill and few or no bass are caught, then overharvest, high natural mortality, or poor survival of young bass has occurred. This problem can be corrected by stocking fifty 8- to 12-inch bass per acre. Bass less than 15 inches in length should be released when caught until small bass become abundant. One of the harvest strategies mentioned above can then be followed.

If only small bass and no sunfish are caught, harvest of bass has not been adequate or no sunfish are present. In this situation, 200 4- to 5-inch bluegill should be stocked per acre. Approximately twenty 8- to 12-inch bass should be harvested per acre per year over the next two years. After this time, a decision should be made as to which of the management strategies described above will be followed.

Removal of Unwanted Fish

Ponds which contain large numbers of rough fish such as gar, bowfin (mudfish), bullheads, carp, suckers or shad are best managed by the complete removal of all fish from such ponds, and then restocking with desirable species. This process is called pond renovation.

The least expensive method of removing unwanted fish from a pond is to drain it, and to allow its bottom to dry. Unwanted fish will often leave the pond through the standpipe. Those remaining will die as the pond water evaporates. This will effectively remove any fish from the pond, and will allow bottom sediments to oxidize. Many impounded ponds in the Florida panhandle can be drained. If a pond cannot be drained, as is the case with many dug-out ponds in Florida, any water remaining in the pond can be treated with chemicals to kill the fish. Rotenone is the chemical most frequently used. When used at recommended rates, rotenone is not harmful to livestock or other warm-blooded animals, even if they drink the pond water immediately after treatment. During the autumn, when water temperatures are above 70°F, is the best time to renovate a pond to ensure a complete kill prior to restocking.

Rotenone comes in both an emulsifiable powder and liquid form. The powdered form can often be obtained from your local feed and seed store. The liquid form is occasionally available from local sources,



but is usually mail-ordered. Contact your County Extension office or the regional office of the Florida Game and Fresh Water Fish Commission. The first step in reclaiming a pond is to determine the quantity of rotenone required. The surface area of the pond (in acres) should be multiplied by the average depth of the pond (in feet) to give the pond volume in acre-feet. At the recommended rate of 2 parts per million, 5 pounds of 5% powder or 0.65 gallons of liquid rotenone is needed for each acre-foot of water. For example: if you have a 1-acre pond with an average depth of 5 feet and you treat with 0.65 gallons of rote-