of volume rather than weight. Oyster harvesters catch tubs, sacks, and barrels of oysters. Oyster shuckers are paid by the gallon for meat shucked, and consumers buy sacks of whole oysters and gallons, half-gallons, or pints of oyster meat.

Following are the approximate relationships among the different measures.

- A bushel basket or a tub equals 1 sack.
- Four sacks equal 1 barrel.
- An average sack yields about 6 pints of oyster meat, depending on the time of year.
- If oysters are packed 4 sacks to a barrel, a sack should weigh about 60 pounds.

Ecological Value

Oyster reefs are becoming widely recognized for their ecological value as well as their economic value. Healthy reefs filter large amounts of water, contribute to a reduction in excess nutrients, and provide food and shelter for an estimated 360 species of marine organisms. Highly valued game fish are also often associated with oyster reefs.

The Future

Oysters are a valuable natural resource in Alabama. The industry provides jobs and a large economic benefit to the state.

Like all marine resources, oysters depend on good water quality for continued use by man. Good water quality can be maintained by preserving wetlands, by careful planning of dredging activities, and by controlling pollution both in Mobile Bay and in the tributaries that feed the bay.

ALABAMA COOPERATIVE Extension SYSTEM

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ANR-832 MASGP-02-012

Richard K. Wallace, *Extension Marine Specialist,* Professor, Fisheries and Allied Aquacultures, Auburn University

Auburn University Marine Extension and Research Center
4170 Commanders Drive, Mobile, AL 36615
(251) 438-5690

Cooperating Agencies
Alabama Cooperative Extension System
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For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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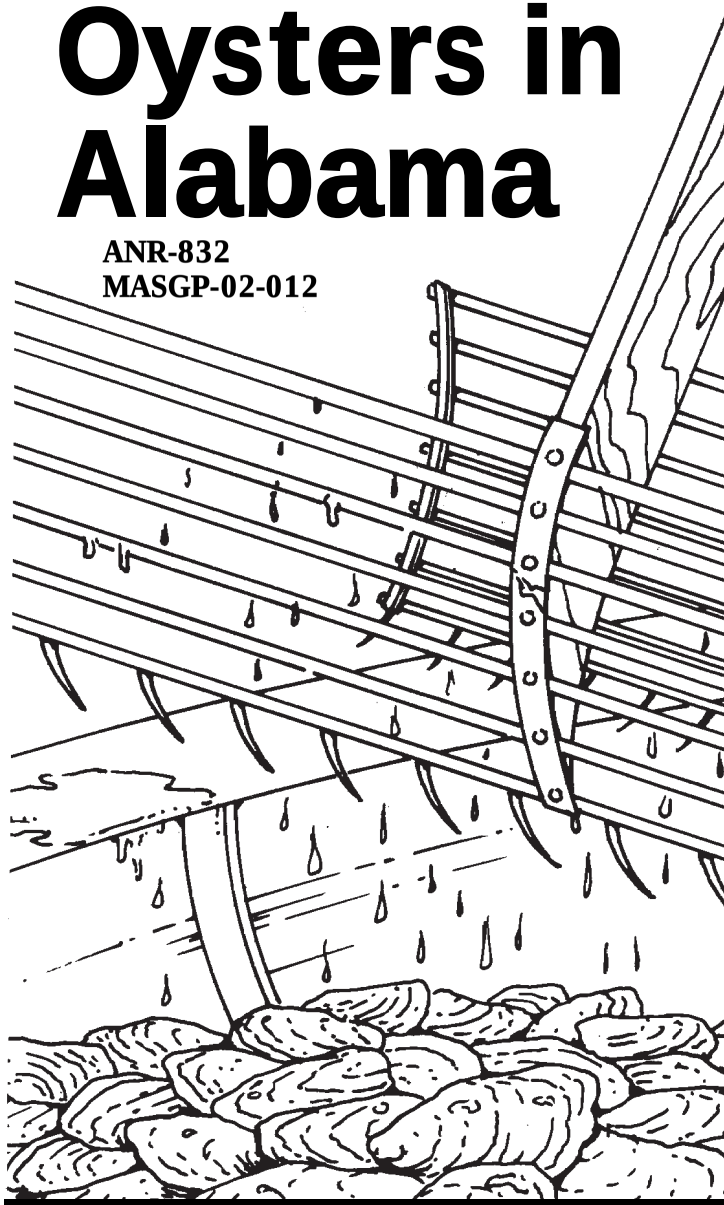

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Oysters in Alabama

Alabama waters contain several of the more than 100 species of oysters found throughout the world. Among those in Alabama, only the Eastern oyster *(Crassostrea virginia)* is commercially important. Oysters, along with mussels and scallops, are among the invertebrates called pelecypods (hatchet foot) that are included in the phylum Mollusca (clams, snails, squids, and octopods).

Annual oyster landings in Alabama vary greatly. In recent years, landings have been as high as 1.5 million pounds of meat and as low as 9,500 pounds of meat. The 20-year average is about 644,000 pounds of meat. Similarly, the value of landings (amount paid to fishermen) has varied from $2.1 million to $24,000 with a 20-year average of about $900,000. The average contribution to the economy is estimated to be $3 million per year.

Biology

Oysters spawn from April through October if the water temperature is 72 degrees F or higher and salinity is above six parts per thousand (ppt). Eggs and sperm are released into the water for fertilization. Females release from 70 million to 170 million eggs. The fertilized eggs develop into a free-swimming larval stage in about 24 hours. After several weeks, the developing shell on larvae becomes too heavy for swimming, and the larvae settle to the bottom. Larval oysters require a clean, hard bottom for attachment and can actually move about on the bottom seeking a good substrate. If good bottom is found, larvae secrete a fluid that cements them permanently to the bottom. Larvae settling out in soft mud or other unsuitable areas usually do not survive. Once settled, the developing oysters can become sexually mature within a month but usually take longer. They can then contribute to another generation of oysters in a very short time. Interestingly, oysters sometimes change sex after spawning. In particular, young males often become egg-producing females.

Oysters eat by filtering food from the surrounding water through their gills. Under ideal conditions, an oyster can pump 5 gallons of water an hour through its filtering apparatus. Alabama oysters reach harvestable size (3 inches) in about 24 to 30 months.

The Environment

Oysters are bound to one spot after they settle and are at the mercy of the water brought to them by currents and tides. When the water is too fresh (less than 10 ppt salinity) for long periods, oysters die. On the other hand, when salinity is high, oysters are likely to be devastated by oyster drills (snails), crabs, and a tiny parasite called a dermo. Oyster drills alone are capable of killing 85 percent of the young oysters on a reef. Furthermore, oysters can be smothered by sand and silt from dredging operations or extremely heavy storms.

Management

Oyster management can be divided into two areas of concern—public health and conservation. The Alabama Department of Public Health and the Department of Conservation and Natural Resources, Marine Resources Division monitor the waters around oyster reefs. They close the reefs to harvesting when bacterial counts indicate that disease-causing organisms are above acceptable levels. These closures generally coincide with high river flow in winter and early spring, which carries increased pollution into the lower portion of Mobile Bay. Bacteria and other pollutants cause problems for oysters because they are filter feeders and can concentrate harmful substances in their body tissues. Generally, these pollutants do not harm the oysters but make them unfit to eat, especially raw.

The Marine Resources Division conserves oysters by requiring licenses, by enforcing a size limit of 3 inches, and by allowing only hand or oyster tong harvest on public reefs. The Marine Resources Division also plants oyster shells or clamshells to provide new substrate for oyster larvae to settle on and grow. Large amounts of clamshells or other materials are often planted after natural disasters, and oyster shells are regularly planted to replace shells removed in the harvesting process. Significant opportunities remain for additional shell plantings if resources become available.

Oyster Measures

Unlike many other foods, oysters are harvested, processed, and sold on the basis