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Editorial

Significance of Oyster Farming in Aquaculture

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EDITORIAL

Oyster farming

Oyster farming is a practice of aquaculture (or Mari culture), where oysters are cultivated and bred primarily for pearls, shells, and edible visceral tissue. Oyster farming was started by the ancient Romans in the 1st century BC on the Italian peninsula, later in England for export to Rome. The French oyster industry has relied on farmed oysters since the late 18th century.

History

Oyster farming was already practiced in the 1st century BC by the ancient Romans of the Italian peninsula. Oyster farming in the Mediterranean and Atlantic Oceans ended with the invasion of barbarians. In fact, the Romans were the first to grow oysters. Roman engineer Sergius Orata is known for his innovative ways of growing and selling oysters. He did this by growing molluscs in a system that could control the water levels.

Varieties

Commonly cultivated food oysters include the eastern oyster *Crassostrea virginica*, the Pacific oyster *Crassostrea gigas*, the Belon oyster *Ostrea edulis*, the Sydney rock oyster *Saccostrea glomerata*, and the southern mud oyster *Ostrea angasi*.

Cultivation

Oysters grow naturally at the mouth of brackish waters. Propagation involves controlling (or at least monitoring) the temperature and salt content of the water to initiate spawning and fertilization, and accelerating the rate of maturation. This can take several years. The first step in oyster farming is bloodstock conditioning. Breeding resources are "parent" oysters that provide gametes to larvae. Wild oysters are "ripe" only in the short window of the gamete. All oysters in a region spawn at the same time, increasing the likelihood that gametes will meet and produce fertile larvae.

When a farmer actually wants to lay oysters, he puts a batch of oysters in a dish and quickly heats and cools the water to start laying eggs. It is important to keep a lot of oysters, as it is difficult to tell whether they are male or female by appearance. Once the oysters have begun to lay eggs, they can be picked up and placed in a separate container until all gametes have been released. The egg and sperm can then be mixed and fertilized. Larval aquarium should be cleaned and disinfected before adding water to the aquarium. Water quality needs to be adjusted for the species, but most larvae generally grow faster in warm water. Once the fertilized eggs and early larvae are placed in the aquarium, they should be fed with filtered or cultured algae daily and the water changed every other day. This prevents pathogens and alien species from invading the system and competing with or eating larvae, maintaining water quality to promote growth. This is the most fragile stage of an oyster's life story. Three methods of cultivation are commonly used in each case oysters are cultivated to the size of "spat," the point at which they attach themselves to a substrate. The substrate is known as a "cultch" (also spelled "cutch" or "culch"). The loose spat may be allowed to mature further to form "seed" oysters with small shells. In either case (spat or seed stage); they are then set out to mature. The aging technique makes a choice of cultivation method. One method is to spread the spat or seeded oysters on an existing oyster bed and let them mature naturally. Such oysters are harvested using the methods used to fish wild oysters. The second method allows you to place the spat or seed in a rack, sack, or cage that is held off the ground (or you can tape it to a vertical rope with three). Oysters cultivated in this way can be harvested simply by lifting bags or shelves to the surface to remove mature oysters, or by removing large oysters when the enclosure is exposed at low tide. The latter method avoids the loss of some predators, but is more expensive. The third method is to put the spat or seeds into a cult in an artificial maturation tank. The mature tank can be supplied with water that has been specially treated to accelerate the growth rate of oysters. In particular, water temperature and salt content can vary slightly depending on nearby seawater.

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