

# THE DEFINITION OF “AQUACULTURE” IN THE VIRGINIA FISHERY

## Background



Oyster aquaculture has a rich history in Virginia. In the 1890's Virginia's oyster ground was surveyed and divided into public and private areas. The public areas, known as Baylor grounds, contained most of the natural oyster bars and the private areas were those considered unproductive at the time. These unproductive areas required husbandry, such as planting shell substrate or transplanting wild seed, which is the historical definition of aquaculture and still happening today. Fast forward several decades to the entry of hatchery technology and the birth of the modern definition of aquaculture.

Be aware when that there are these two different ways to define aquaculture – the traditional definition, the more modern definition (which may only be considering production from a land-based hatchery), or both.

## Modern, or hatchery-based, production methods

The two methods of hatchery-based aquaculture are intensive (containerized) and extensive (traditional, on-bottom). Intensive culture uses single oysters which are sold by the piece for a higher price into the boxed market. Extensive culture strikes oyster larvae on bushels of shell in land-based tanks which are then planted directly on the bottom. Called spat-on-shell (SOS), this form of aquaculture is similar to traditional culture, with the exception of source being the hatchery and not Mother nature. SOS is harvested by traditional methods (dredges, scrapes, tongs, etc.) with oysters sold by the bushel in the shucked, or meat market.

## What data is available and how does it differ?

**Oyster Landings** come from the Virginia Marine Resources Commission (VMRC) mandatory harvest reporting which is on a seasonal basis (July 1 to June 30). The State oyster landings data are separated between public ground (wild-caught) and private ground (a mix of wild-caught and hatchery-based culture). Mandatory reports include gear type so intensive, or containerized aquaculture is easily identified but the extensive, or SOS harvest is not distinguished from traditional, wild-caught because they are harvested with the same gear type. It is for this reason Figures 2 & 3 are only estimates.

VMRC Landings: <https://mrc.virginia.gov/SMAC/VA-Oyster-Harvests.pdf>

**Trends** come from VIMS' Virginia Shellfish Aquaculture Situation and Outlook Report and are assessed annually by a volunteer grower survey. The survey reports only the hatchery-based aquaculture plantings and sales. These numbers are used to track the annual trends in this sector.

VIMS Reports: <https://www.vims.edu/map/aquaculture/shellfish-aquaculture/publications/index>

## Take-home messages

Hatchery-based aquaculture is on the rise which contributes to the increase in private ground landings over public landings seen in the last several years (Figure 1.). On-bottom culture (traditional and modern) dominates over the hatchery-based containerized culture on private ground (Figure 1.). Overall landings are still dominated by the wild oyster (Figure 2.). On private ground, it is estimated that landings are equal between hatchery and wild product (Figure 3.) For a closer look at Virginia's oyster productivity – both public and private, check out the [Virginia Oyster Productivity Tool](#).

FIGURE 1.

Virginia Oyster Landings - total

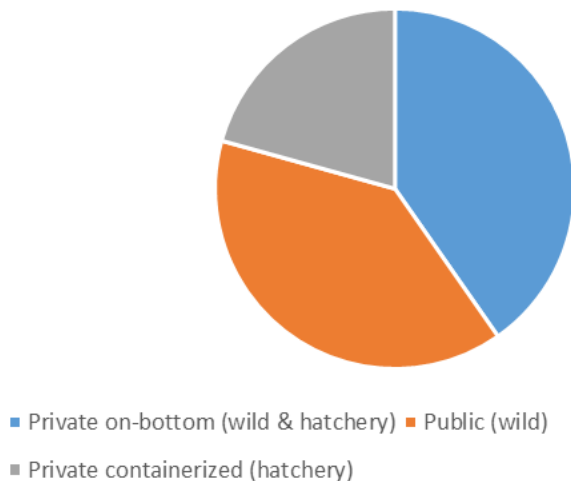


FIGURE 2.

Virginia Oyster Landings Estimate -total wild vs hatchery

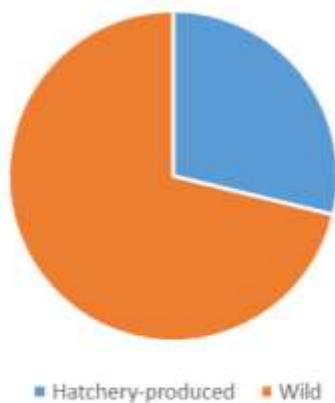


FIGURE 3.

Virginia Oyster Landings - Private wild vs hatchery



Figure data taken from 2016 calendar year VMRC landings. Note Figures 2 & 3 are estimates.

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