

Outrageously Unnatural: The Dangers of Octopus Farming

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Abstract

The viability of octopus aquaculture has recently been evaluated in experimental settings with the goal of establishing industrial-scale production. This paper reviews the ecological, economic, ethical, and public health concerns associated with octopus farming. Unlike conventional livestock industries, cephalopod aquaculture would operate without the ability to vaccinate animals against infectious disease because octopuses lack acquired immunity and immunological memory. Escapes from captivity are frequently documented and may introduce apex predators into surrounding ecosystems, increasing predation pressure on crustaceans, facilitating disease transmission, and affecting wild octopus populations. Wastewater discharge may contribute to harmful algal blooms, parasite amplification, and other environmental impacts. Land-based facilities present additional challenges, including repeated escape attempts, reliance on continuous water filtration and oxygenation systems, and vulnerability to infrastructure failures that can result in large scale mortality events and taxpayer-supported disaster relief. Octopuses are highly sentient animals with complex behavioral needs that are difficult to accommodate in captivity. Experimental farming conditions have been associated with aggression, cannibalism, self-mutilation, stress, and elevated mortality. Numerous jurisdictions have introduced or enacted policies restricting octopus farming. Based on these findings, we recommend against the establishment of industrial-scale octopus aquaculture.

Keywords

Aquaculture, carnivorous agriculture, concentrated animal feeding operation, octopus.