WAGENINGEN UNIVERSITY
AQUACULTURE AND FISHERIES

Coral Culture

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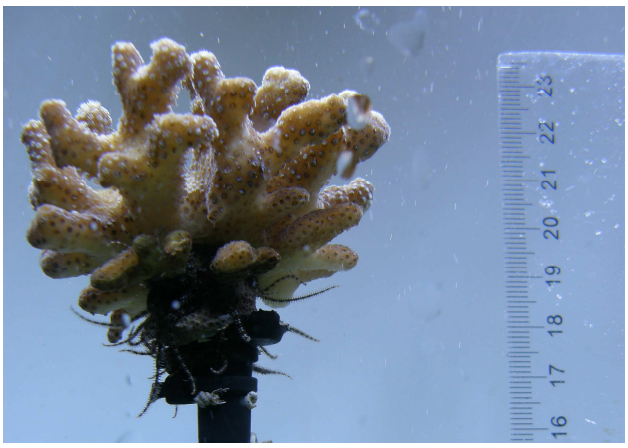
Being the main builders of coral reefs, zooxanthellate scleractinian corals (i.e. calcifying corals that live in symbiosis with microalgae called zooxanthellae) are of crucial importance for marine ecology. Coral reefs represent an important economic resource for society, providing food, possibilities for tourism and ornamental animals for aquaria. Natural reefs are under pressure: various human-induced factors such as climate change, overfishing, pollution and uncontrolled tourism negatively affect reef health. The growing demand for aquarium corals has also contributed to the deterioration of natural reefs. Here, *ex situ* aquaculture of corals in aquaria may provide a suitable alternative.

Appropriate management of natural reefs requires a thorough understanding of reef development in a changing environment. For this, it is crucial to identify the factors that determine the growth rates of corals and to understand how these factors interact. The same knowledge is needed for efficient breeding of corals *ex situ*.

Research on coral culture at AFI concentrates on the key question “What determines coral growth?” The expertise of the AFI coral group on specialized coral mesocosms and respirometric flow chambers enables the execution of both long-term growth experiments and short-term metabolic measurements under controlled conditions. Currently, interactive effects of the availability of light, food and water flow on coral growth are studied.



The current project, CORALZOO, is a collaboration between research institutes, zoo’s and public aquaria (under auspices of the European Association for Zoos and Aquaria – EAZA) and the ornamental trade. This project focuses on several relevant aspects for breeding and handling stony corals such as sexual and asexual propagation, factors affecting growth (light, water flow, nutrition), coral health, coral morphology and coral transportation. Ronald Osinga is coordinator of this project.