

IDENTIFICATION OF AREAS FAVORABLE FOR COBIA *Rachycentron canadum* CULTURE OFF THE COAST OF BRAZIL CONSIDERING TEMPERATURE AS THE SOLE DETERMINING FACTOR

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There is recent interest in Brazil towards developing marine fish farming along its coastline. The species of interest is cobia (*Rachycentron canadum*) as it easily spawns in captivity, and presents a rapid growth rate and a high quality white flesh. In this study, we identified areas along the Brazilian coast that present favorable conditions for the commercial culture of cobia considering temperature as the sole determining factor. Using data collected by the satellite Aqua/NASA, a survey of the variation of sea surface temperatures (SST) was conducted during the period 2005-2009. We divided the Brazilian coast in four regions (North, Northeast, Southeast and South). Based on the literature, water temperature classes were created in accordance to the effects on the performance of this species, especially those related to food intake, growth and mortality.

Most of the coast off Northern Brazil showed little variation of SST, with mean temperatures ranging from 27 to 29°C, and between 29 and 32°C. The Northeastern region showed a relative seasonal variation of SST. In summer, temperatures ranged between 29 and 32°C, while during autumn and winter they remained in the range considered optimal (27 to 29°C), while in other areas it ranged from 19 to 27°C. With the exception of summer, SST in Southeastern Brazil remained between 19 and 27°C. Southern Brazil was considered the least favorable region for cobia culture, with higher SST reaching 27°C and lower than 16°C. It was possible to infer that cobia may be reared year around in Brazil. The only exception is the southern region, which presents temperatures between 16 and 19°C from June to September. It is therefore estimated that the rearing of cobia in southern Brazil would only be possible for six to eight months a year.

The coastal area extending from eastern Pará to northern Bahia presents the most appropriate conditions in terms of temperature for the commercial culture of cobia in Brazil and therefore it is highly recommended. The coastal areas extending from the state of Amapá to the west of Pará, as well as the Southeast and South regions, may be recommended but with restrictions. Commercial culture of cobia is not recommended in southern Brazil.