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to Meet Seafood Demands*

**FENACAM & LACQUA/SARA (WAS) '15
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SOUTH AMERICAN REGIONAL AQUACULTURE 2015
XII INTERNATIONAL SHRIMP FARMING SYMPOSIUM
XII INTERNATIONAL AQUACULTURE TRADE SHOW
IX INTERNATIONAL AQUACULTURE SYMPOSIUM
3rd TILAPIA ECONOMIC FORUM**

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CEARA CONVENTION CENTER
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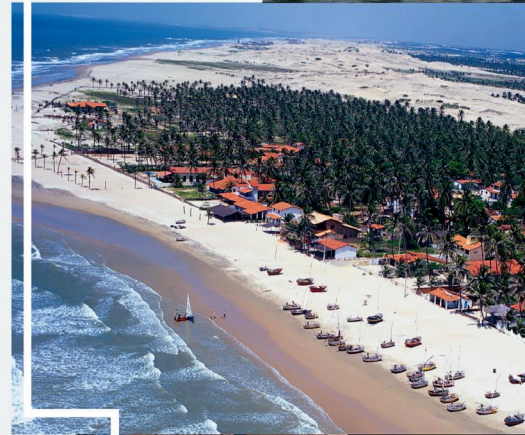


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ABSTRACTS

TOTAL USE OF WATER IN TILAPIA (*Oreochromis niloticus*) PROCESSING PLANT

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Fish processing plants are characterized by a high consumption of natural resources. Water is required for almost all of the processing stages including depuration, desensitization, slaughter, surface cleaning, heading, gutting and filleting. In addition, the plant cleaning process, during and after industrial activity, requires treated water for decontamination purposes. In order to obtain data on the use of water at a tilapia processing plant, ultrasonic hydrometers (HYDRUS®) were installed at 14 points within the establishment to measure the water consumption of each sector. Also, the average total amount of water used for the industrial processing (L kg^{-1} of raw material and L kg^{-1} of finished product) was calculated. Readings were taken weekly, between June and November 2014. During this period, the total amount of water used at the plant was 80.048 m^3 . The sector in which the depuration tanks are located showed the highest water consumption (40.71%), followed by those associated with the general cleaning of the plant (32.32%) and the scaling cylinder (11.24%). On the other hand, the measuring points corresponding to the areas related to the canteen and administration offices (0.02%), holding tanks for the fillet freezing (0.57%) and fillet trimming (0.79%) showed the lowest rates for the use of water in the processing (Figure 1). The average consumption of water in the processing was $16.99 \pm 1.44 \text{ L kg}^{-1}$ of raw material and $57.12 \pm 5.79 \text{ L kg}^{-1}$ of finished product. Thus, it can be concluded that in relation to water use there are critical points at the plant where a high consumption of water is required for tilapia processing.

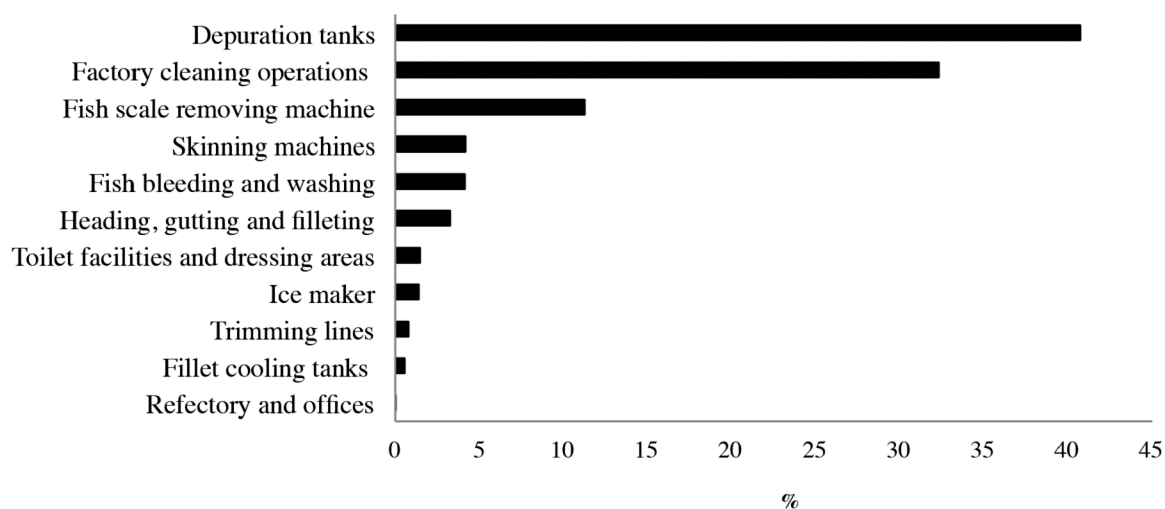


FIGURE 1. Distribution by sector (%) of the water consumed at the tilapia processing plant during the study period (06/18/2014 to 11/14/2014).