

Masculinization of Tropical Eel *Anguilla bicolor* McClelland in Different Population Density

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Abstract	<p>In general, female eel dominates the results of catching eel in the river. Male fish are rarely found in nature, therefore masculinization is necessary for obtaining in males. The administration of 17α-methyltestosterone to masculinize <i>Anguilla bicolor</i> McClelland. It is a synthetic anabolic-androgenic steroid which has potential to endocrine disrupter that disturbed function of normal reproduction in human or animal. It urgently needed that a masculinization technique needs to study the use of an environmental factor. Population density is one of the environmental factors that influence gender determination (ESD-environmental dependent sex determination). This will result in increased cortisol secretion, which will further stimulate the synthesis of 11-KT steroids that affect male gonad differentiation. This study aims to induce masculinization in tropical eel <i>Anguilla bicolor</i> McClelland in different density. Three treatments and three replicates conducted the research. The treatments were one fish.48 L-1, two fish.48 L-1 and three fish.48 L-1. Eels size was approximately similar, at 16,78 g\pm0,62 in weight, and 25,38 cm\pm0,15 in length were either culture in brackish water for eight weeks. The results showed that density population treatment significantly increased the Fin Index ($P < 0.05$), but no sign for Eye Index, GSI, HSI, and testosterone level. The highest male population (77,8%) achieves at the highest density treatment, three fish.48 L-1 population density. It can be concluded, based on reproductive observations, population density does not affect gonad maturity/puberty, but the high population density (3 fish.48 L-1) stimulates <i>Anguilla bicolor</i> McClelland masculinization.</p>
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Author	Dr Dra FARIDA NUR RACHMAWATI, M.Si