

Improvement of octopus drift line in Korea, for enhancing the environmentally friendly performance

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Octopus drift line is the individual-setting type of vertical line gear, very popular in Korea, floated with the foam polystyrene buoy, and the four-hook jig with pig-skin bait towed on the seabed. Each fisher operates 30-50 sets, by drifting and retrieving each individually. In Gangwon Province, northern part of South Korea, the total of 800 boats are engaging in this fisheries, with big worries on the possible amount of abandoned and lost gear, especially concerning the toxic effect from the lead used in this gear as the sinker attached at the end of hook line. For enhancing the environmentally friendly aspects of this gear, the alternative materials for sinkers and the jig modification were examined through the laboratory and field experiments. The laboratory observation was conducted to understand the response of octopus against the different colors of white, yellow, black, and green sinkers, so as to confirm the white color sinkers most effective to release the feeding behavior of octopus. The new type jig attached with crayfish model, with a piece of squid meat or boiled fish paste, was also compared with the conventional jig with pig-skin bait. The new type of jig with squid meat was observed to be more attractive than the others, by monitoring the octopus response to hold the jig firmly and longer. The field experiment of comparative fishing confirmed the higher catch efficiency than the conventional gear. These results of the modification of fishing gear and methods for octopus drift line, as the crayfish jig with white sinker, can establish the opportunity to reduce the number of drift lines for each fisher, so as to reduce the fishing impacts with the lost/abandoned gear in this fishing ground.

