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Effects of Cultivation Methods on the Emergence of Weeds and the Growth and Yield of Paddy Rice, with Special Reference to using Aigamo Ducks

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Abstract:

The purpose of this experiment is to clarify the effect of Aigamo ducks on the prevention of weeds, and the grain yield and culm of paddy rice (*Oryza sativa* L.). The plots prepared in this experiment were an untreated plot, an Aigamo plot and habitual culture plot. The emergence of weeds was decreased by Aigamo duck herding. There was no difference in the grain yields of the Aigamo and habitual culture plots. The reason why the emergence of weeds was decreased in the Aigamo plot is that the Aigamo ducks ate the weeds and the water of the paddy field became clouded. If the Aigamo ducks were herded for a long term, the number of weeds would decrease. The culm of the paddy rice was not affected even though the Aigamo ducks were herded in the field. However, compared with the habitual culture plot, the lengths of the 4th and 5th internodes (The 1st internode was the top internode) became shorter, the short diameter of the 3rd internode became thicker and breaking resistance became larger, and the lodging index became smaller in the Aigamo plot. As a result, the lodging resistance of the paddy rice in the untreated and Aigamo plots increased as compared with the habitual culture plot.

Keywords:

Aigamo ducks, Culm, Cultivation method, Paddy rice, Weed control

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