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**An adaptable to climatic change and early maturing rice variety 'Gawaji 1'
for double cropping system in Gyeonggi-Do, northern area of South Korea**

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Abstract

'Gawaji 1', an early maturing and low amylose content rice variety adaptable to double cropping system with barley as later winter crop., was developed by the crop breeding team of Crop Research Division, GARES, Hwaseong, Korea in 2016. 'Gawaji 1' was derived from a cross between 'Baegjinju' and 'Sangmibyeo' in 2004. This variety had heading date of August 4 in Gyeonggi Province. It had a semi-elect plant type and resistance to lodging with strong culm. Its culm length was 67 cm. This variety had 15 tillers per hill and 104 spikelets per panicle. It was medium grain variety showing 1,000 grain weight of brown rice of 19.3g. Its protein contents of milled rice was 8.2% which was lower than 'Baegjinju'. Its milling ratio was 75.5% which was higher than 'Baegjinju'. The yield of milled rice was 5.0 MT/ha under the ordinary culture of the local adaptability test in 3 areas of Gyeonggi Province for three years. 'Gawaji1' is highly adaptable to Gyeonggi Province, especially to northern region of Han River.

Keywords: rice, low amylose, gawaji1, Climate change

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