

Market Price Survey and Antioxidant Capacity Analysis of Organic Rice in Hualien Area¹

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Abstract

In this study, the rice price, antioxidant capacity, and antioxidant materials of organic or conventional cultivation were discussion and analysis on Hualien area. The result shows that, in rice market just about 30% were organic product, 70% were conventional product. For market price, general organic rice is higher than conventional rice. In organic cultivation, the Taikeng 9, Taichung-Sen 10, Kaohsiung 139, and Kaohsiung 145 are main varieties. For antioxidant capacity and antioxidant material analysis, general the milled rice by organic cultivation have higher DPPH(α, α -diphenyl- β -picrylhydrazyl) scavenging effects and chelating ability ferrous ions than conventional cultivation. In brown rice, the organic cultivation has higher DPPH scavenging effects, chelating ability ferrous ions are better than conventional cultivation. In varieties, the Taichung-Sen 10 is good than Kaohsiung 139 on antioxidant capacity and antioxidant material. Other, the brown rice are better than milled rice on oxygen radical absorbance capacity(ORAC), chelating ability ferrous ions, reducing power, total polyphenol, and total flavonoid of both two practices, and there were have significantly different.

Key words: antioxidant capacity, antioxidant materials, milled rice, brown rice, organic cultivation, conventional cultivation.

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