

Quality evaluation of local brand rice in rice exporting countries

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Abstract

This study evaluated the grain quality of local brand rice from 6 major rice exporting countries which are anticipated to export their rice to Korea. Recently, with the end of the postponement of rice import tariffs in 2014, Korea is in a very easy environment to import foreign rice. Therefore, the quality evaluation of local brand rice in those countries is needed to secure the quality competitiveness of Korean rice, also to protect the rice industry in Korea. We provided total 38 local brand rice from USA(7), China(16), Australia(4), Thailand(3), Vietnam(5) and India(3), and 2 imported brand rice through MMA from USA and China to find out the status of the grain quality for each country. For the quality evaluation, we analyzed the physicochemical properties, milling and palatability-related characteristics. The amylose content on country average ranged from 24.4(India)~16.2%(Thailand). The protein content was 6.66% by overall average, and was higher in order of India(7.86), Australia(6.80), Vietnam(6.61), Thailand(6.59), China(6.28), USA(5.82). In Toyo glossiness value, it ranged from 75.7~45.2, and the figures in USA and China were the highest level. The head rice ratio ranged from 95.2~72.4%, and the figures in Thailand, USA and China were distinctly high. When we analyze the palatability of boiled brand rice with Chucheongbyeol as check variety by expert panelists, several rice brands from USA and China showed equal or better scores in shape, smell, taste, stickiness, texture and overall score, although most rice brands showed a tendency to decrease significantly in the taste characteristics compared with Chucheongbyeol. From the above results, it can be seen that the grain quality of USA and China rice is very competitive when imported into Korea. The results will provide basic information for the quality control of foreign rice which will be imported into Korea in the near future, also for the quality information which could be applied on the development of high-quality Korean rice varieties. Continuous monitoring about the foreign brand rice is advisable to improve the quality competitiveness of Korean rice.

Keywords: imported rice, MMA, brand rice, quality evaluation

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