

Sumon Hoymala 2009: Farmer Adoption and Consumers' Acceptance of New Flood-resistant Jasmine Rice in Rain-fed Lowland in Thailand. Master of Science (Agricultural Research and Development), Major Field: Agricultural Research and Development, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Apichart Vanavichit, Ph.D. 100 pages.

Hom Mali 80 (HM80), the rice variety developed for tolerance to flash flooding in rain-fed lowland area. HM80 was distributed and extended for the first time to farmers in Yasothorn, Amnat Charoen and Utraradit provinces in 2007. Here we evaluated the farmer adoption and consumers' acceptance of HM80 in 2007-2008. The evaluation was conducted on several potential flooding sites using questionnaires, interview and sensory testing.

Evaluation of farmer's adoption for HM80 indicated that most farmers were satisfied with the similarity with Khao Dawk Mali 105 in agronomic characters such as panicle, seed shape, grain aroma and cooked rice tenderness. Farmers were also satisfied with low lodging and high tillering of the HM80. Most of all, HM80 were sold at similar price as KDML105. Although in 2008, no flooding affected the target growing areas, the farmers' decision on growing the next crop of HM80 did not change and the rice variety has been expanding to neighbouring area as well.

The cooking qualities analysis of the harvests of HM80 and KDML105 indicated that the aromatic compound, 2AP, in brown rice were 1.5-2.7 ppm and 1.8-2.5 ppm, for HM80 and KDML105, respectively. In addition, both HM80 and KDML105 are similar in amylose content (12-17%) and gelatinization temperature (lower than 70 °C) to KDML105. However, seed width and percentage of milled rice were higher in HM80. Consumers were satisfied with HM80 in cooking qualities, cooked rice aroma, soft texture and grain length the characteristics of KDML105. For these reasons, consumers prefer HM80 as KDML105 rice for consumption.

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Student's signature

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Thesis Advisor's signature