

Global Status of Glutinous Rice

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Glutinous rice (GR) contains low (0-5%) amylose, making it very soft and sticky. It is also called as the Waxy rice as it appears like uncarved wax after cooking. Amylopectin component of starch is responsible for the stickiness of glutinous rice. Stickiness is not specific to japonica or *indica* or tropical japonica (*javanica*) ecotypes of rice. Rather sticky rice genotypes spread across all available ecotypes of rice are each group that have low or no amylose and hence, cooked to be served as sticky rice. In India, sticky rice is more popular in the North Eastern states where it is consumed as a staple food. While in rest of the country, non-sticky rice with 20-25% amylose content is more preferred. Some GR varieties are aromatic, colors include white, purple and black, and grain size varies. Glutinous rice is opaque when raw.

Countries	Area (mha)	Production of paddy (mt)	Yield (t/ha)
Thailand 1/	3.17	7.37	2.32
Laos PDR 2/	0.86	3.02	3.51
Myanmar 3/	0.036	0.11	3.06
Vietnam 4/	0.77	3.67	4.78
Cambodia	na	na	na
China	na	na	na
Total	4.836	14.17	2.93

Source: 1/ Obtained from OAE data available in 2013; 2/ Office of Foreign Trade Promotion, Vientian referred in OrawanSrisomphun, 2012. 3/ Myanmar Department of Agriculture 4/ Dao the Anh and Pham Cong Nghiep (2012) Report on rapid Assessment of Glutinous Rice Trade and Consumption in Vietnam. Na= data not available

Global production of milled white rice is about 476 mt where glutinous rice makes up 5% (23.8 mt) of it. Major growers of glutinous rice are, Laos, Thailand, Cambodia, Vietnam, Malaysia, Indonesia, Myanmar, Nepal, Bhutan, Northeast India, China, Japan, Korea, Taiwan, and the Philippines. Thailand and Laos PDR are two major sticky rice producing countries in

Southeast Asia. An estimated 85% of Lao rice production is of this type (Delforge, 2001). Other countries in ASEAN have very little areas for sticky rice production. Laos PDR has been recognized as a center for glutinous rice biodiversity.

Major exporters and Importers in the International Market

Major exporters of glutinous rice are Thailand and Vietnam but major importers are Korea and Japan. Although Thailand produces 7.37 mt of glutinous rice, while its domestic consumption is 90%. The remaining 10% (0.74 mt) of GR of Thailand constitute nearly 90% export share of global GR export.

Export Countries	% share	Import Countries	%share
Thailand	89.60	Korea	33.03
Vietnam	9.82	Japan	15.93
Japan	0.22	Hongkong	10.78
Pakistan	0.18	Liberia	7.98
Others	0.17	Others	32.28
Total	100.0	Total	100.00
Total Value	(m.US\$) 227.31	Total Value	(m.US\$) 273.47

Source: ETCN, 2556 referred by Orawan Srisomphun

However, the future market for GR shall not only be evaluated by its volume of consumption as cooked whole grain but also its application and utility in the up-surging food and beverage industries (CAGR of 7.5%). It has gained an important place in the beverage industry where it is used to produce *sake* in Japan, vinegar, *mirin* (sweet alcohol used in cooking) or crackers called *senbei* and many other beverages popular in many other countries. The steamed GR powder is also processed to different cuisines and desserts sold at high prices in the food outlets. Due to its gluten free nature, it is earning high popularity in the food industry.

It's also one of the components of miso paste, an essential ingredient in Japanese cuisine. Mochigome or glutinous rice is used for making mochi, traditional rice cakes. Rice flour, made from ground up white or glutinous rice, is used to make various Japanese sweets and rice crackers (senbei), as a thickening agent in cooking, or as substitute for wheat flour to make bread.

Status of glutinous rice germplasm in NRRI Gene Bank

The glutinous rice germplasm was collected from North-East states namely Sikkim, Assam, Arunachal Pradesh, Manipur, Nagaland and Tripura since last 6-7 decades. Total of 42 accessions of such germplasm were collected and conserved in NRRI medium Term Storage (MTS) gene bank.

Varieties

Kmj 3-292 (Bhogali) and Kmj 3-296-3 (Rongili) were developed at AAU, Titabar (Ahmed et al 1993). Lungnilaphou, glutinous rice variety is suitable for valley areas, ICAR-NEH, Umiyam (<https://icar.org.in/files/rice%20varieties%20for%20licensing%20from%20ICARNEH.pdf>)

Few varieties with low amylose content have also been released through AICRIP specially for NEH regions. The varieties RC Maniphou-6, RC Maniphou-10, RC Maniphou-12 and RC Maniphou-1 are low amylose content varieties for the state of Manipur.

With the rapid growth of food and beverage industry worldwide, the demand for the sticky rice is predicted to increase due to its suitability to be processed into different types of snacks coatings as sweet dishes, beverages, vinegar, etc. For the preparation of Momos, thupka, desserts, sticky rice is more preferred. Considering these it may be concluded that the demand for glutinous rice may increase in future. The climate and soil of the North

Eastern states of our country are very suitable for growing these glutinous. Therefore, it seems that there is high chance of increase in demand for glutinous in the coming years under the rapidly changing food habits, accelerated growth of food industries.

**For Recent Status of Glutinous rice in global trade, its trends and prices 'TridgeMarket Intelligence' (<https://www.tridge.com/pricing/data?next=%2Fproducts%2Fglutinous-rice>) may be followed. (Paid site for market intelligence)*

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