



## Thai rice innovation-New opportunities in medical and beauty industry



### Highlight

- Rice, which is Thailand's main economic crop, are now used in medical and beauty products, which are industries that have strong potential owing to increasing consumer interest in health and beauty. Skin products, cosmetics and medical products used in dentistry and surgeries made from rice have the same standard as their import counterparts, yet they are cheaper and safe. As such, in future these innovations will help raise the value of Thai rice, lower imports and enable Thailand to become an exporter of rice products.
- EIC views that research and development in technology and marketing strategies will be key challenges to the investment and improvements of medical and beauty products made from Thai rice. Government and private sector should support research that will allow Thai rice products to continually advance. Furthermore, business alliances should be formed among businesses within the country and with those from overseas. Meanwhile, determining suitable markets for these product categories and target consumer groups will help increase product recognition and enable them to compete on the global front.

**Rice innovations used in medical and beauty products will add value to Thai rice.** Rice, which is Thailand's key economic crop that is primarily used for consumption, is now being processed into new products, especially in the medical and beauty industry as interest in health and beauty grows across all age groups. A survey conducted by EIC showed that all age groups are more aware of their wellness and beauty, in particular those aged 41-60 years old, of which 66% are already regular users of beauty products. The survey also reflected that concern over health and wellbeing increased with age. These new innovations in medical and beauty products using rice should thus support Thai rice value to rise and become a one driving factor for further price increases. Currently owing to price volatility and unfavorable weather conditions, both domestic and export rice prices have been falling by 4% per year (Figure 1) during 2011-2016.

**Beauty products made from rice have good potential as the domestic beauty product market has been growing by 8% per annum during 2011-2016 and is expected to reach 130 billion baht in value by 2020.** Skin product, which has the highest market share, accounted for 75% of the value of beauty products, whilst cosmetics, which has the second highest market share, accounted for another 22% of the

market. In terms of volume, the market size of facial cosmetics like powder was as large as 4.4 billion baht in 2016. Thailand now is able to produce rice baby powder and rice pressed powder that are safe and degradable. The product aligns well with current consumer preferences for naturally made and chemical-free products. EIC's survey also reflected similarly, as up to 51% of the 41-60 years old age group and 46% of the elderly group said they want to use products naturally made (Figure 2). Another innovation is the use stem cells from rice varieties like jasmine and riceberry that have anti-aging properties in producing skin products. The product is not only 7 times cheaper than imported brands but its demand from around world, especially in Asia, North America, Australia and Europe is increasing due to a growing anti-aging market.

**Furthermore, rice can be integrated into medical products that are used in dentistry and medical surgeries.** The medical industry is one of the top ten industries promoted by the Thai government. However, Thailand imports medical equipment from overseas by over 1 billion U.S. dollars per year, of which imports of disposable products has been growing fastest at a rate of 10% per year during 2011-2015 (Figure 3). Nevertheless, medical surgery sponge made from rice is an innovation that will be able to substitute its imported gelatin counterpart. It is 3 times cheaper and thus can cut import cost of products used to control bleeding and dressing wounds by 19% of all imported disposable medical products. This is because these sponges are essential in surgery and up to 200 thousand pieces are used each year. Another rice innovation is anesthetic made from rice that are used in dental procedures to relieve pain. The product, which will cut cost of anesthetic by 10 times, will support growth of Thailand's dental industry that is already the second most popular destination for foreign dental patients. From the above examples, the use of medical products made from rice, which is becoming more widespread within the country, will help lower cost of imports as well as opens new opportunities for Thailand to become a producer and exporter going forward.

**Technology development, marketing and increasing product recognition among local consumers and those overseas, remains a key challenge to investment and product improvement.** The majority of medical and beauty products made from rice already have internationally equivalent certification for productivity and quality. However, in producing these products a large sum of investment is required as their production technology have high safety standards. Thus, Thai businesses are encouraged to find alliances that are leaders in technology and invest jointly with them in the research and development that will upgrade products into becoming more competitive on global market. Good marketing strategy is also a crucial, in particular for beauty products, of which up to 57% of its consumers shop from both retail stores and online. Therefore, having more than one distribution channel will not only help increase consumer's access to the product but the products itself can obtain better recognition.

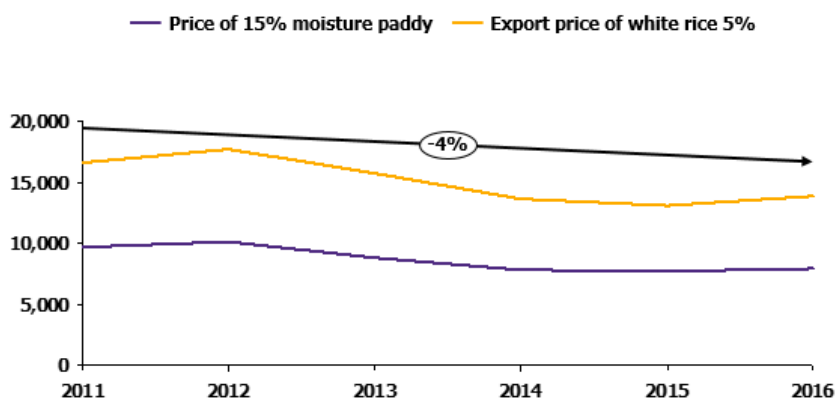
**Implication** ■ **The government and private sector should promote and support research and development in technology in order to continually improve rice innovations.** EIC views that growth of the medical and beauty industry will be a one factor that can significantly raise the value of Thai rice, given continual support from

the government and private sector in promoting research and development. Furthermore, the private sector are encouraged to seek both domestic and overseas alliances that are leaders in technology and invest jointly with them in research and development. Such strategy will support enhancement of rice innovations in medical and beauty product and allow them to become more recognized and competitive on the global market.

- Businesses needs to determine appropriate marketing strategy and focus on creating new rice innovation that responds to consumer preferences. In doing so, businesses should plan their investment, develop more variety of products and determine suitable marketing strategies for each product type and each countries' consumer preferences. Such factors will be critical in supporting Thai businesses to grow and be able respond to larger range of consumer preference.

Figure 1: Price of 15% moisture paddy and export price of white rice 5%

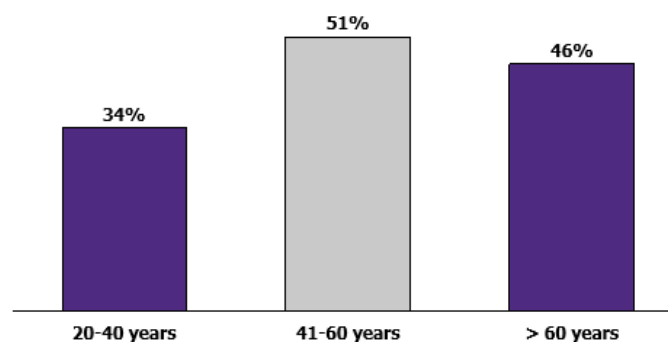
Unit: baht per ton



Source: EIC analysis based on data from Office of Agricultural Economics

Figure 2: Consumer demand survey for natural and chemical-free products

Unit: % of all respondents by age group

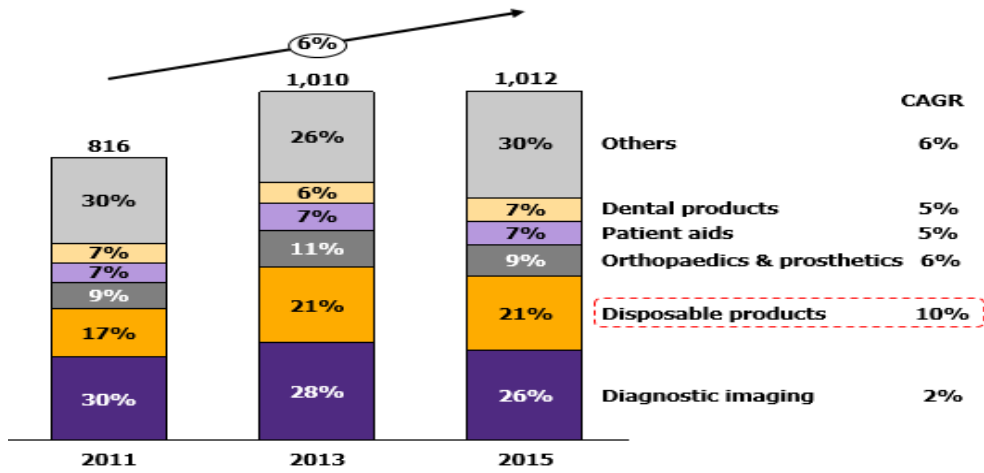


Source: EIC survey

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Figure 3: Value of Thailand's import of medical equipment

Unit: million USD



Source: EIC analysis based on data from BMI

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