![APTERR logo - ASEAN PLUS THREE EMERGENCY RICE RESERVE]

WEEKLY UPDATE ON ASEAN PLUS THREE RICE SITUATIONS

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Myanmar

Myanmar and China will collaborate to study rice types for the Chinese market. Pursuant to a Memorandum of Understanding (MoU) signed between Myanmar and China for bartering goods, the country got an additional rice export quota of 100,000 tonnes from China. Following the agreement, the Myanmar Rice Federation (MRF) and the China National Cereals, Oils and Foodstuffs Corporation (COFCO) will cooperate in classifying rice varieties to study what type of rice grown in Myanmar can meet China's market demand. Under the MRF-COFCO agreement, selected firms which have been inspected by a board formed from officials from the Ministry of Commerce, MRF, experts from the relevant fields as well as other government officials would be allowed to export their rice to China. According to the MRF, a report would be sent to China from the Department of Agriculture after the inspection has completed. Presently, a total of 103 rice mills owned by 42 companies, that have applied for rice-export permission to China, has been inspected.

Source: The Myanmar Times. (2019, Jul 2). *MRF and COFCO to study rice types for China export.*

Viet Nam

Ninh Thuan province uses laser land levellers to prevent irrigated water runoff. The south-central province of Ninh Thuan is using laser-operated land levellers on large rice fields to increase yields and efficient use of irrigation water, as the province has the lowest rainfall in the country and its rainy season lasts only from September through November. A laser-operated land leveller creates a flat surface on the rice fields, which allows irrigation water to reach every path of the field, resulting in reducing water runoff or logging. The province's Agriculture Extension Centre started using the machines in the 2018-19 winter-spring crop in Ninh Phuoc district. According to the director of the centre, training in using the leveller was provided to farming households. With the machines, fertiliser, pesticide, and irrigation water are less needed. In addition, the machines reduced the use of seeds from 200-250 kilograms per hectare to 170 kilograms. The profit from this model are 614 USD per hectare, up 322 USD compared to normal fields, said director of Ninh Quy Agricultural Service and Trade Co-operative in Ninh Phuoc. Ninh Thuan was the first province in the south-central region to use the technique. The People Committee of Viet Nam has also instructed the local Department of Agricultural and Rural Development to expand the model to other localities.

Source: Vietnam News. (2019, June 29). *Ninh Thuận uses laser land levelers to reduce water runoff on rice fields.*

The Mekong Delta province of Kien Giang has successfully adopted the rice-aquaculture farming model. The Mekong Delta province of Kien Giang has expanded its most efficient rice and aquatic species farming models in An Minh district for the last two years. In case of low yields of rice, many farmers have switched from growing rice to breeding aquatic species. They have expanded the model of rotating between rice in the rainy season and shrimp in the dry season on

the same fields to enhance their incomes. The province has about 92,000 hectares of rice-shrimp fields and has adopted several efficient shrimp farming models such as extensive, intensive, semi-intensive, and two-stage industrial models. The success rate of the two-stage shrimp farming model is more than 90 percent, while farmers can breed 2-3 crops a year. Additionally, farmers can earn about 6,450-8,600 USD per 500-1,200 square meters pond (0.05-0.12 hectares) per crop, according to the head of the An Minh district Agriculture and Rural Development Bureau.

* 1 square meter = 0.0001 hectare
  1 hectare = 10,000 square meters

Source: Vietnam News. (2019, Jun 27). *Kiên Giang widens efficient rice farming, aquaculture models.*

China

Chinese researchers discovered a gene to help reduce heavy metal in rice. Cadmium is a kind of toxic heavy metal, which can be easily absorbed and enriched in rice, and causes a serious threat to human health through the food chain. Recently, Chinese researchers from the Institute of Botany, the Chinese Academy of Sciences, and China Agricultural University have successfully discovered a gene called OsCd1, which plays an important role in cadmium accumulation in rice. The OsCd1 was a plasma membrane protein in the root, indicating that it may mediate the cadmium absorption in rice root. Thus, the disruption of the OsCd1 resulted in a decrease of cadmium accumulation in rice. The study also further analysed different molecular mechanisms of cadmium accumulation in indica rice and japonica rice. The study has a great potential for application in low-cadmium rice breeding, especially in indica rice, according to the research team.

Source: Xinhua. (2019, Jul 2). *Chinese researchers discover gene helping rice reduce heavy metal pollution.*