

Analysis of rice value chain in Egypt and perspectives for innovation

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INTRODUCTION

Rice is important in Egyptian agriculture sector, as Egypt is the largest rice producer in the Near East region. It is the primary staple food for about half of the world's population and Egypt is the most important rice market in the North Africa, being that is the only rice-surplus country in Africa [1]. Rice is one of the most important agricultural crops that the country exports to other countries in Africa and the world. The rice market in Egypt is segmented based on production, consumption, import and export [2].

PRODUCTION AND CONSUMPTION

Rice cultivated area in Egypt is about 0.65 million ha (Figure 1) and its production was 6.0 million tones (Mt) in 2000/2001, contributing about 20% to the *per capita* cereal consumption. In 2010/2011 and in 2018/2019 there was a decline in production and, in general, the values have been decreasing over years. This is probably because the government was trying to restrict the rice area to save water, since is necessary a large amount of water to grow rice [3]. Rice consumption is relatively constant, but there was a slight increase, since the values varied between 3.0 Mt (2000/2001) and 4.2 Mt (2021/2022).

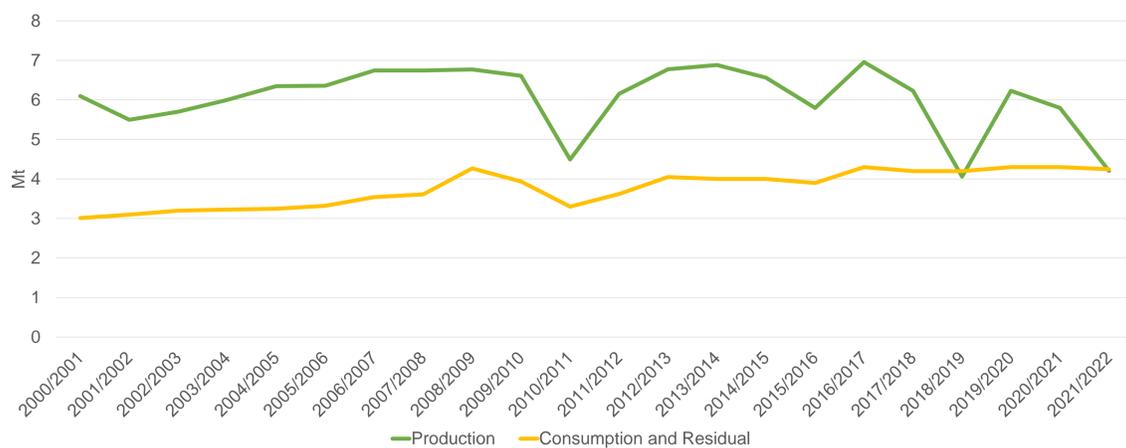


Figure 2 – Rice production, consumption and residual, in Egypt, between the years 2000 and 2022. Source: FAS USDA, April 2022

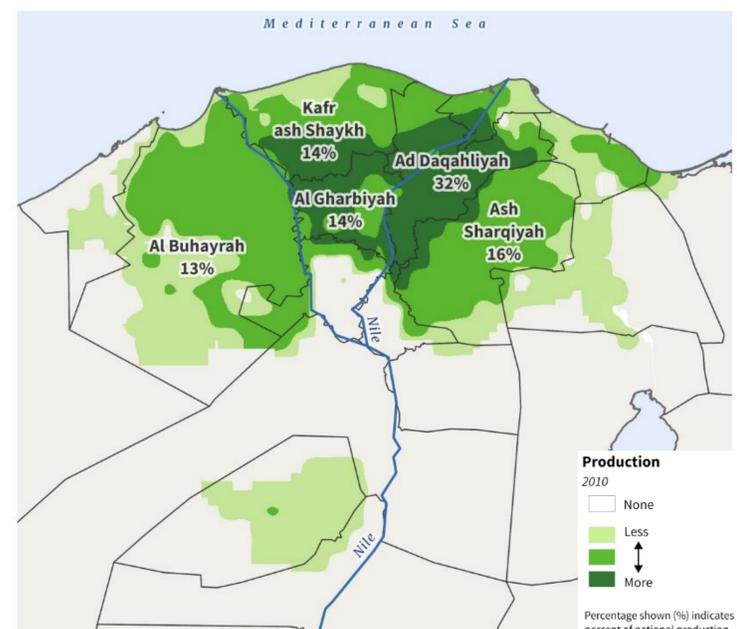


Figure 1 – Crop production map of rice in Egypt. Source: International Food Policy Research Institute, 2019, "Global Spatially-Disaggregated Crop Production Statistics Data for 2010 Version 2.0", <https://doi.org/10.7910/DVN/PRFF8V>, Harvard Dataverse, V4

Rice is grown mostly in the Nile Delta, mainly because of its thick clay-covered soils [4]. The climatic characteristics of the country are favourable to a high yield of rice, being one of the most important summer crops of the region [3].

Generally, while rice exports have been decreasing over the years, imports have been increasing. Due to the higher demand compared to production, the Egypt is highly import-dependent for rice [2].

CONCLUSION / INNOVATIONS

The consumer demands for high premium *Japonica* varieties. TRACE-RICE project will characterize Egyptian Giza 181 and Giza 177 varieties by DNA molecular markers and physico-chemical parameters to deliver authenticity and traceability tools for strength the domestic rice value chain.

EXPORTS AND IMPORTS

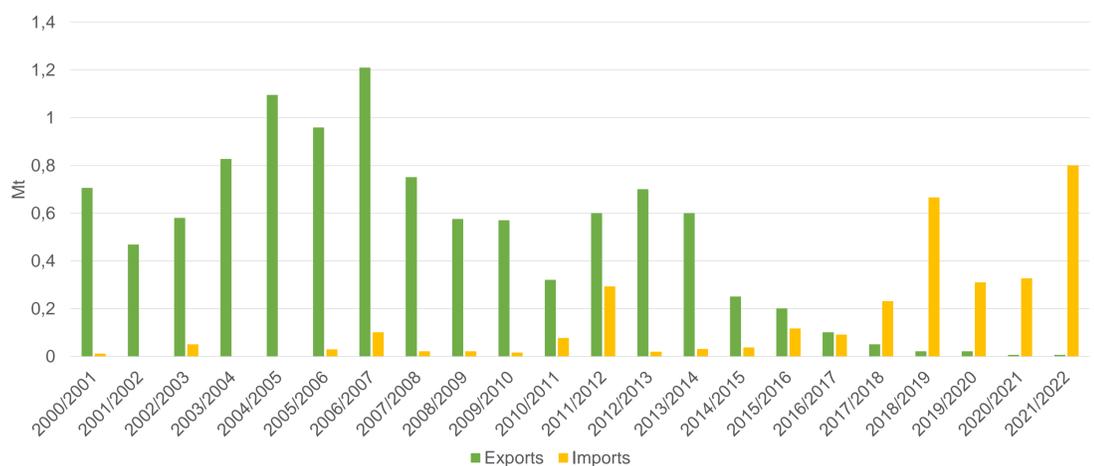


Figure 3 – Exports and Imports (trade year) of rough rice between the years 2000 and 2022. Source: FAS USDA, April 2022

REFERENCES:

- [1] Childs, N. W. (2004). Production and Utilization of Rice. In Rice Chemistry and Technology (3rd Edition). pp. 1-20
 [2] <https://www.mordorintelligence.com/industry-reports/egypt-rice-market> Consulted online at 22nd April, 2022

- [3] Yehya, S., Rice in Egypt. n.d.
 [4] Elbasiouny, H. & Elbehiry, F., Rice Production in Egypt: The Challenges of Climate Change and Water Deficiency. 2020; 10.1007/978-3-030-41629-4_14.

