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THE HISTORY AND DYNAMICS OF RICE IN ROMANIA

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Abstract. *Rice became an important ingredient in the Romanian cuisine under Greek and Turkish influences during the last centuries of the Ottoman Empire presence in the Balkans. Recently, after 1989, rice cultivation and production collapsed, due to several economic factors and inappropriate policies. In this context, the present paper examines the evolutions of rice production, exports and imports in the last 60 years, the current situation, as well as the perspectives for its evolution.*

Keywords: *rice, production, import substitution policy, tradition, trade.*

Introduction. Rice is the second grain produced and consumed in the world, after maize, according to UN Food and Agriculture Organization (FAO). Rice is grown in many parts of the world and is a major source of income for many farmers. Over half the world's population use it, making it vital for food security and economic stability in many regions.

The first rice crop in Romania was established in the mid-18th century in Timiș County, close to the Serbian border. Between 1950-1989, rice cultivation increased in terms of area, production and know-how. After 1990, rice cultivation and production collapsed, due to several economic factors and inappropriate policies. Romania is currently among the eight EU countries that produces rice, but, similarly to the other Member States, is not self-sufficient, hence significant imports, mainly from Asian countries.

Literature review. There are pros and cons regarding the development of rice farms in Romania. Among the pros are: land areas with water resources suitable for rice paddies, improved biodiversity (birds, fish, snails, snakes, insects, butterflies, etc.), groundwater recharge, flood buffer, moderating local air temperature,

preventing soil degradation and secondary salinization process (Mantu, 2012). Among the cons are environmental disadvantages, such as: use of pesticides and herbicides, increased water consumption, possible competition for water with other uses, overlapping of rice fields with Natura 2000 areas, rice-generated emission of methane (Vijulie et al., 2016).

Research methodology. The data on production, consumption and trade used in this paper were extracted from Eurostat, TradeMap, Faostat, and Tempo-online databases. Publications from EU Commission and various academic sources were consulted as well.

Main results. *International context.* Since the 60-s, world total rice production increased continuously, from 215 million tonnes in 1961 to 800 million tonnes in 2023 (3.7 times) (FAO, 2025). While area under rice increased 1.5 times only (from 115 to 168 million hectares in the mentioned period), it was the yield gains that pushed up the total harvest, due to technological advances, such as high-yield variety seeds and modern irrigation methods. Nevertheless, recent challenges such as climate change, water scarcity, and soil degradation resulted in a slowdown of the upward trend.

Top rice producers in the world are China, India, Bangladesh, Indonesia, Vietnam, Thailand, Myanmar, Philippines, Pakistan and Cambodia, with China and India producing 52% of the total world rice output. The total exports amounted 60 million tonnes in 2024 (Trade Map, 2025), of which 74% were by the top five countries: India (30%), Thailand (17%), Pakistan (11%), Cambodia (9%) and Vietnam (7%).

In the EU, rice is not a staple. Although the average rice consumption increased from 7.4 to 9.4 kg/capita/year between 2010 and 2022, it is quite far from the per capita yearly consumption in main rice producing and exporting countries (e.g. 132 kg in China, 194 kg in Philippines, 245 kg in Cambodia).

In the EU, there are eight rice producing countries: Italy, Spain, Greece, Portugal, France, Bulgaria, Romania and Hungary. Their combined production amounts 2.8 million tonnes (average 2000-2023) of paddy rice (~1.7 million tonnes milled rice equivalent); of which Italy produces 53% and Spain 27%. Romania ranks 7-th, with 1.1% of the EU rice production. EU is not-self-sufficient for rice (60% only), its domestic use is about 2.8 million tonnes milled rice equivalent.

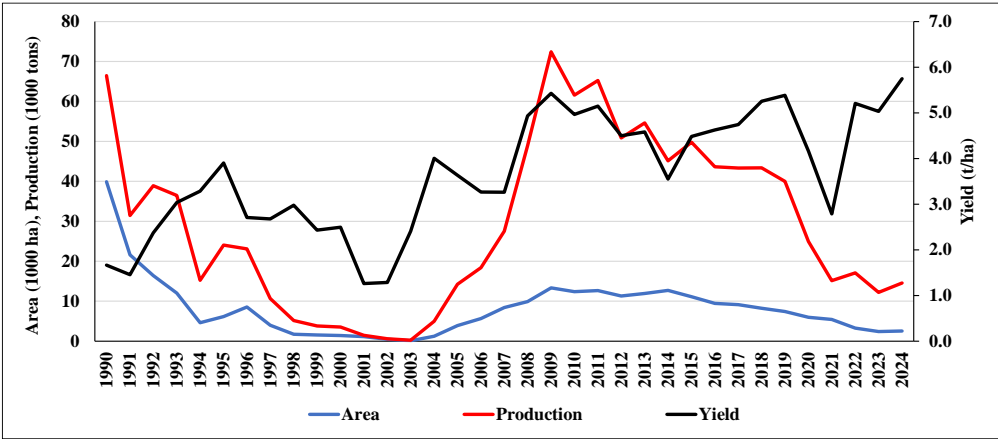
A historical overview of rice cultivation in Romania. The first rice paddy farm established in Romania in Timiș County mid-1700 survived to date due to some brilliant engineering: water comes through gravity from a nearby river, and no pumps are needed. It worked 100 ha in 1934, 200 ha in 1944, and the farm is still there today, with 530 hectares (Mantu, 2012).

In the 70-s, in Romania, rice was among the agri-food products with high imports (after sugar and citrus fruit). In 1972, Romania adopted the import substitution policy concept, quite popular among the developing countries in the 50-s and 60-s, which promoted the idea of a continuous substitution of imports by domestic production. In this vein, taking advantage of its friendship with Asian countries such as China and Vietnam, Romania revived its rice cultivation and production, all along focusing research on creating new rice varieties, suitable and

well adapted to the favorable conditions in the Danube meadow and Delta. As a result, areas under rice increased substantially in the 80-s, and production was able to cover the domestic demand and allowed even some exports.

Recent dynamics. After 1990, rice cultivation and production collapsed, due to several contributing factors such as: import liberalization, land fragmentation and restitution to former owners as result of agricultural cooperatives dismantling, reorientation of crops with high degree of mechanization and international competitiveness (e.g. wheat, maize, sunflower and rapeseeds), land grabbing by foreign companies and joint ventures, and inappropriate policies. Currently, there are left only 23 farms in Romania cultivating rice. Between 1989 and 2003, areas under rice diminished drastically, from 49,300 ha, down to 105 ha. It increased again until 2014, then remained around 13,000 ha for the next five years (*Figure 1*), only to decrease sharply again down to 2,430 ha in 2023, despite various forms of support: Basic Income Support for Sustainability; Complementary Redistributive Income Support for Sustainability; Complementary Income Support for Young Farmers; Coupled Income Support; Environmentally Beneficial Practices Applicable to Arable Land; Practicing Environmentally Friendly Agriculture on Small Farms – Traditional Households (1–10 ha); Transitional National Aid 1 (ANT1); State Aid for Diesel Used in Agriculture (MADR, 2025).

Figure 1. Romanian rice: area, production and yields (1961-2024)



Source: Faostat, <https://www.fao.org/faostat/en/#data/QCL>, Tempo online, <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>

Yields varied largely as well, from 1.26 t/ha (2001) up to 5.43 t/ha (2009), mostly due to draught intensity. Combined with the instability of areas (89% variation coefficient in 1990-2023), the resulting production has been also strongly unstable, varying between 253 tonnes (2003) and 72,400 tonnes in 2009.

Given that the average demand for human consumption is about 90,000 tonnes per year (eq. milled rice), large imports were needed, resulting a continuous negative trade balance for rice, and a self-sufficiency rate that diminished from 25% (2014) down to 6% (2023). Nevertheless, after 2010, Romania exported quantities of rice between

10,000 and 52,000 tonnes. Imports were far higher, from 45,000 to 126,000 tonnes, depending on the size of domestic production. With a negative trade balance in both quantity and value terms, Romania has been a continuous net importer of rice.

Conclusions. Although currently a net importer, Romania benefits from some favourable resources of land and water, hence may expand its rice area and production. Several limitations challenge market growth, such as climate change impacting rice yield, fluctuating international trade policies, and competitive pricing pressures from alternative grains. Potential research and innovation areas include developing resilient rice varieties that can withstand adverse weather and adopting smart farming techniques to optimize yield and reduce resource consumption. By focusing on sustainability, health benefits, and technological integration, stakeholders can drive growth and resilience in the evolving rice market landscape.

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