

STATISTICAL STUDY OF THE PRODUCTION OF THE MAIN TYPES OF GRAIN PRODUCTS (ON THE EXAMPLE OF SURKHANDARYA REGION)

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Abstract

Foods from grains and grain-derived ingredients are among the most important energy and nutrient source for humans. Cereals (e.g., wheat, rice, corn) have been the conventional food materials, while interest is growing in utilizing pseudocereals (e.g., buckwheat, quinoa, amaranth), pulses (e.g., dry peas, chickpea, dry beans), oilseeds (soybean, peanut, hempseed), and other grains for the development of various foods and food ingredients. Grain and food processing converts raw grains to functional ingredients and produces palatable and nutritious end-products. Examples of grain-related processes include, but are not limited to, drying, milling, fractionation, hydration, fermentation, extrusion, cooking, baking, frying, steaming, freezing, etc. Various physical and chemical changes and interactions are expected during these processes, which further affect the nutritional, textural, sensory, and many other quality properties of the products.

Keywords: Grains, ingredients, food materials, nutritious, fractionation, hydration, fermentation.

Introduction

Meeting the demand for cereals remains a major challenge as the world population grows. While there have been positive developments in rice and wheat production, a decline in feed grain production could have a negative impact on the livestock sector. The Food and Agriculture Organization of the United Nations (FAO) has released its cereal production outlook for 2024 and the 2024/25 marketing year. It highlights a number of key indicators and global trends, according to the Plant Protection and Quarantine Agency. Global cereal production is expected to decline by 0.4 percent to 2,848 million tonnes. The main reason for this decline is a decline in feed grain production, which is due to adverse weather conditions. Wheat production is also expected to increase. This is expected to be driven by increased agricultural production in Asia and favorable weather conditions for the crop. This increase will further strengthen global wheat reserves.



Rice production is expected to reach 538.9 million tonnes in the 2024-2025 season. This is a new global record and indicates a steady increase in rice production. Global cereal consumption is also expected to increase by 0.5 percent to 2,857 million tonnes.

Global cereal stocks are expected to increase by 0.6 percent to 889 million tonnes. The increase in stocks is mainly due to an increase in rice. The ratio between global cereal stocks and consumption is 30.6 percent, which is close to average.

At the same time, the decline in international trade is likely to put economic pressure on countries that depend on food exports and imports. Countries need to take steps to further strengthen their food strategies and increase domestic production.

For the first time in Uzbekistan's history, the grain harvest has exceeded 9 million tons, as reported by the Council of Farmers, Dekhkan Farms, and Landowners of Uzbekistan.

This year's harvest yielded over 2.55 million tons of grain from irrigated fields, representing an average of 2.5 tons per hectare. The state procurement process has been successfully completed, and reserves are now stored in warehouses for trading on exchanges.

To enhance this year's harvest, new high-yield and weather-resistant winter wheat varieties have been planted, expanding the cultivation area to 585,000 hectares and replacing biologically outdated varieties.

In 2023, Uzbek grain farmers produced over 8.1 million tons of grain, with average yields in irrigated fields reaching 70.5 centners per hectare.

Farmers of Uzbekistan have grown more than 8.1 million tons of grain

Tashkent, Uzbekistan (UzDaily.com) -- To date, more than 8.1 million tons of grain have been grown in farms and agricultural enterprises of Uzbekistan, and the average yield in areas with a good level of water supply has exceeded 70.5 centners. This was reported by the press service of the Ministry of Agriculture.

In total, 75 commercial representatives collected 2,722,000 tons (106 percent) of products, including 2,456,000 tons of marketable grain (1,305,000 tons for purchase to the state reserve and 1,151,000 tons for temporary storage with subsequent sale on exchanges). At the same time, 265,600 tons (110 percent) of seed grain were harvested for the 2024 crop.

As a result of the timely and proper organization of agrotechnical measures, the grain yield was 74.8 centners per hectare in Bukhara region, 74.2 centners per hectare in Tashkent region, 73.8 centners per hectare in Samarkand region, 73 centners per hectare in Ferghana region, 73.5 centners per hectare in Andijan region, 73 centners per hectare in Khorezm region, 72.3 centners per hectare in Surkhandarya region, 72.1 centners per hectare in Syrdarya region and 72.6 centners per hectare in Namangan region. In order to increase the yield, instead of biologically obsolete varieties, the areas of 12 high-yielding, weather-resistant varieties (including 8 local ones) of winter wheat have been expanded on 585,000 hectares.

The sowing season ended 10-12 days earlier than in previous years, and thanks to the rains in the third decade of October and in November, grain was harvested in most fields in conditions of natural soil moisture.

Also in the spring months, foliar top dressing was carried out: 3 times with nitrogen mineral fertilizers (750-800 kilograms per hectare in physical terms) and 4-5 times by the suspension method with biostimulants enriched with macro- and microfertilizers. For the systematic harvesting of grain crops, 2,557 grain harvesting teams were formed in a short time, and 3,205



high-performance combines, 14,725 trucks and 1,000 tractor tractors were involved. 1,261 mobile workshops and 1,134 gas stations were involved in organizing the harvesting campaign at the proper level and maintaining equipment in good condition. Depending on the phases of grain development and maturation of varieties, harvesting began on 22 May in Surkhandarya region, on 24 May in Kashkadarya region, on 29 May in Syrdarya, Tashkent and Bukhara regions, on 31 May in Jizzakh region, in Ferghana, Navoi, Andijan and Samarkand regions – on 2 June, in Khorezm region – on 5 June and in the Republic of Karakalpakstan – on 8 June. Such positive results are the result of the reforms carried out in agriculture in our country, and the growing interest of farms in the fruits of their activities. In addition, all this is supported by the timely implementation of agrotechnical measures using modern methods and advanced technologies.

In this case study, we discuss the consequences of maintaining specific wheat production, consumption, and trade policies for different stakeholders. We show that wheat prices are not only influenced by domestic policies but also by international factors. We also look at the ability of the current system to withstand negative external shocks such as the 2007–08 international food crisis. We approach the policy options from the viewpoint of different stakeholders—namely the government, farmers, and consumers. We also consider issues such as regional trade and its role in cushioning the shock of the international food crisis of 2007–08. Though we frequently refer to the initial conditions Uzbekistan faced in the beginning of the 1990s, we focus on the period since 2007 to better understand the Uzbek government's evolving policies in wheat/flour/bread production, consumption, and trade. Our objective is to identify and justify the most important policy options to better respond to wheat price changes. To achieve this objective, it is first necessary to understand the political economy of wheat pricing policy. We then provide a list of important policy options for stakeholders, ranging from abolishing the state procurement system to letting farmers decide to grow and trade crops of their choice; and from investing in technology and farmers' education to boost agricultural productivity to building analytical capacity to produce reliable and timely statistical information at the farm level. We conclude this case study with the hopeful observation that the government of Uzbekistan lowered import duties and excise taxes for wheat and other food products.

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