

Tasks, The Implementation of Which Will Ensure the Food Security of the Republic of Uzbekistan

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Abstract: The article tells about the new agrarian policy in the Republic of Uzbekistan, about new approaches to financing the developing agro-industrial complex. Timely state reforms and strategic planning in the field of attracting investments in the agrarian sector of the Republic.

Keywords: greenhouses, vegetable products, agro-industrial complex, agro-food market, drip irrigation, market mechanisms, investment processes, monitoring.

The Government of the Republic of Uzbekistan headed by President Sh.M. Mirziyoyev, set the task for agriculture to increase the production of vegetables, make them available to the population throughout the year [7,10]. Consumption of vegetables every day is one of the main economic indicators of the well-being and health of the nation. The intake of vitamins in natural form is required all year round. For normal life, a person needs 130-150 kg of vegetables during the year. Since Uzbekistan is located in a zone of sharply continental climate and the conditions do not allow obtaining vegetables from the open ground during the year. The cultivation of vegetable products is seasonal, and 25% of their total amount should be grown in greenhouses, hotbeds, insulated soil [9]. In this regard, it is necessary to develop some branches of agriculture. Develop greenhouse facilities at an accelerated pace and introduce advanced technologies. Learn from China, Israel, Spain, Holland, where the greenhouse industry has been successfully developing for a long time and, accordingly, the most advanced technologies and production capacities and invaluable experience have been accumulated. To implement the plans outlined by the president and the government, large investments in the agricultural sector will be required [7,8,9,10]. Our main weaknesses; vegetable growing and horticulture, modernization of agricultural machinery and equipment, development of rural areas and agricultural science, breeding, genetics and bioadditives [4,7].

At the present stage of development, agriculture has become a high-tech business. Businesses want to know what transformations are planned in various sectors and divisions of agriculture and what changes are planned in crop production, how the use of digital technologies helps to increase production volumes and reduce its cost. The investor wants to calculate in advance all the risks associated with an unpredictable and risky agricultural business. Enterprises that use new technologies for innovative growth today will receive reliable and guaranteed results in the agricultural market tomorrow [4].

The agro-food complex of Uzbekistan has received a new direction in development, it has a great future. The country is rich in land, human and natural potential, which are waiting for development. Today, there are about 6.5 thousand hectares of greenhouses in Uzbekistan, of which 1.1 thousand hectares (17% of them) are hydroponic and 4.9 thousand hectares (83%) are soil-based greenhouses [4]. The interest of big capital in the greenhouse industry is growing. The total volume of investments attracted in the development of the agro-complex of the republic for the period from the start of the project, in agriculture amounted to 15.5 trillion. amounts and the share in the total volume of investments in fixed capital for all types of economic activity in the republic were noted at the level of 8.2%. [5,12]. Thanks to government support and investments in the greenhouse economy, the regions have strengthened their production capacities and ensured good growth in vegetables and fruits. Along with milk and meat, mushrooms, greenhouse vegetables, fish, and poultry are grown. In 2021, 271 thousand tons of products were produced in the greenhouses of Uzbekistan, of which 167 thousand tons were tomatoes, that is, 62% of the total volume of greenhouse products. In 2022, it is planned to produce 342 thousand tons of products in greenhouses, of which 199 thousand tons are tomatoes, that is, 58% of the total greenhouse production [10]. Thus, in 2022, the production of greenhouse products in Uzbekistan is planned to increase by 26% compared to last year, and greenhouse tomatoes - by 19%. The main part of the products grown in greenhouses in the Bukhara,

Khorezm, Samarkand and Tashkent regions of the country are tomatoes, bell peppers, cucumbers, eggplants and greens and other vegetable crops [10].

Cultivation of cotton For Uzbekistan, cotton is a mono crop, growing it, even on poor soils, brings a good income. But the yield of cotton crops depends on the climate of the region and the variety of cotton. From 1 hectare of area, you can get from 80 to 120 centners of fiber with natural irrigation. Another advantage of cotton growing is that there are few farms involved in growing the crop, and the demand for raw materials in the market is very high.

In the countries of Central Asia, cotton has always been grown using irrigation. About 4.5 million hectares are allotted for cotton in Uzbekistan. irrigated land, with drip irrigation 400 thousand hectares. Cotton is a delicate crop, sensitive to low temperatures. Frosts in the spring destroy seedlings, large areas have to be resown. Under favorable conditions, seedlings appear in the fields for 5-6 days. In a medium-staple cotton variety, the growing season is 125–150 days, in fine-staple cotton from 145–160 days. To grow a good crop, you need up to 210-220 days without frost, the temperature is + 25 °C, during the flowering of the plant the temperature should be + 26-30 °C. Cotton is highly drought tolerant and consumes more water during flowering and boll formation. Modern methods of growing cotton use several methods of irrigating cotton - gravity, rain, drip [13].

Gravity irrigation involves the supply of water through furrows, channels, reinforced concrete trays or underground free-flow pipelines. This method of irrigation is expensive, the water consumption is very high, and it does not ensure uniform irrigation of the field. Sprinkler systems are used for surface irrigation of cotton. Water is supplied into the air, and in a finely dispersed form falls on plants and soil. The method is quite simple, it moisturizes the soil and the plant well. Disadvantages, high water consumption, it is difficult to comply with irrigation norms [13].

Drip irrigation of cotton involves the presence of special equipment: a system of pipes, filtration equipment, fertilizer application, pipelines and other components. With drip irrigation, the distance between the rows of plants should be from 50 to 100 centimeters, depending on the crop variety, the distance between the droppers should be from 30 to 75 centimeters. Drip lines are laid between rows of plants or directly along the rows, each plant has its own dropper with water. In such an irrigation system, it is possible to regulate the water supply - its speed, intensity, and precisely set the irrigation rate. Through the irrigation system, you can do top dressing throughout the growing season, apply fertilizers, substances that stimulate the growth and development of the plant. Drip lines can be laid on the soil surface or with a recess for direct root irrigation [13].

Drip irrigation of cotton is more cost-effective. This method of irrigation allows you to get a higher yield by 15-20%, while saving water and energy resources and using them efficiently. Drip irrigation allows you to meet the daily water needs of the plant, protects against water stress and optimizes crop growth.

Drip irrigation creates better conditions for crop development and improves the quality of the resulting fiber, oil and other products of raw cotton processing. Water is supplied to each plant rationed. This method is especially effective in arid regions where the amount of water is limited, poor soils. Minerals allow you to apply with a certain frequency and dosage. Fertilizers are spent only on the crop, increasing the efficiency of top dressing. For example, at the beginning of flowering, the plant's need for nutrients increases and continues until the opening of the boxes. During this period, top dressing is carried out during the entire growing season. This reduces nitrate and seed pod drop. It is important that the amount of water is calculated accurately, since its deficiency or excess adversely affects the balance of growth of the seed parts of the plant and leaves [13].

Development of cultivation technology, the correct choice of variety and the installation of highly efficient irrigation systems will make the cultivation of this crop profitable and environmentally safe.

Greenhouses in Uzbekistan use modern technologies for growing vegetables in China, Germany, Turkey, and Israel. To reduce the consumption of fertilizers and irrigation water in greenhouses, drip irrigation is used, remote control is carried out by artificial intelligence. As a result, the yield grown in such a greenhouse is increased by 30% compared to the traditional method, and the amount of water and fertilizer consumed is reduced by 30-40%.

State support is needed, especially for small and medium-sized businesses, start-up entrepreneurs. The Department of Agriculture is currently trying various financing methods to make concessional lending to

small farms affordable. Large agricultural enterprises that are engaged in the cultivation of agricultural products, their processing, sale, conduct trade and procurement activities, purchase surplus agricultural products from the population, it is not profitable for them to get a preferential, short-term loan, they need "long money" [6], long-term loans.

The Republic is faced with the task of providing agricultural producers with finances, high-quality seed material, mineral fertilizers, machinery and fuel, which will allow farms to work without downtime and haste, more rhythmically according to plan. When obtaining loans, the mechanism must be transparent and worked out to the smallest detail. Many auxiliary sectors in agricultural production need to be developed or they need to be formed from scratch. The most important areas are domestic selection, genetics and the production of high-quality seed and planting material. This is a strategic issue, our food security and independence. This is the health and economic well-being of the nation.

The state supports and develops family businesses, small farmers and entrepreneurs, and dekhkan farms. By 2030, there will be 28 thousand 700 households in Uzbekistan [5]. Moreover, in Uzbekistan, the rural population is 60%. The republic develops agricultural cooperation, creates conditions for the growth of incomes of residents of rural areas. Improves the quality of life in the countryside. Develops infrastructure, social sphere of the village [7]. We are talking about the development of modern medical institutions with specialists of a wide and narrow profile, the construction and equipping of modern rural schools, kindergartens, sports schools and other public institutions with new equipment and specialists [1,2]. Gasifies remote villages and improves the quality of drinking water and supplies general sewerage, provides high-quality mobile communications and the Internet to remote settlements: everything is important for a rural resident. Thus, bringing rural areas closer to the city and pouring them into the general social and economic space of the country. But most importantly, to update the state of local roads [3,4,5]. To make life in the countryside more modern, comfortable and attractive. Constantly improve life so that all people and every person feel the changes and the care of the state. Only by creating conditions for improving the quality of life and self-realization, the Republic will ensure the sustainable development of the village. It must be remembered that the most important thing is people and territories.

The President and the government understand this and are actively developing new packages of laws, using financing mechanisms in the construction of new greenhouse complexes with modern energy-saving technologies. Last year was one of the most successful for the greenhouse market in recent years. 251 hectares of new greenhouses were commissioned, and these are fifth-generation complexes, where modern energy-saving technologies are used. Thanks to this approach, the average yield in winter greenhouses has increased to a record high of 60 kg/m². m. The Ministry of Agriculture claims that the average yield increased by 33% [4].

Thus, serious changes are also expected in the sphere of land relations in the coming years. The first step towards reforming the rights to use agricultural land was made already in September 2020 by introducing a sublease mechanism for the purpose of growing agricultural products, which will allow the most efficient use of valuable land resources [10].

Already in 2017-2022, reforms were carried out in the agriculture of Uzbekistan, the results of which made it possible to ensure sustainable growth of the industry and increase resource conservation. In the future, they will serve to the fullest use of the existing potential of the republic in agricultural development and bring Uzbekistan to the forefront in the production and export of agri-food products [11].

Uzbekistan, together with the countries of the Central Asian region, forms the agro-food market. Modern approaches to solving the food problem provide conditions for stable, efficient, rational reproduction and functioning of the agricultural sector.

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