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### Present Significance of Rice Farming

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**Abstract.** This article talks about the system of rice farming in Uzbekistan and its development, the decision of the Cabinet of Ministers No. 986, the strategy of "Development of agriculture" for 2020-2030, and technologies of rice cultivation.

**Key words:** Rice farming, agricultural products, high quality, growing season, planting method, repeated cropping, cultivation technology.

Today, the increase in the number of the population causes an increase in its demand for food. This requires obtaining a high-quality harvest from agricultural products. In particular, attention is being paid to the field of rice cultivation, and the size of cultivated areas is increasing year by year. It is considered an important task to select and create rice varieties suitable for each soil and climate. Today, the agricultural sector has been proven in the strategy "Development of the agricultural sector" for 2020-2030 developed by the head of our country, and a number of works are being carried out in this regard in our country. In addition, the decision No. 986 of the Cabinet of Ministers of the Republic of Uzbekistan dated 12.12.2019 was developed, in this decision "On additional measures for the sustainable development of rice cultivation" [1] a number of tasks were defined, which continuous works are being carried out in connection with its execution. In particular, rice farming clusters have been established and their activities are being developed. It is no exaggeration to say that all these are examples of work aimed at the development of the rice farming system.

Half of the world's arable land is planted with cereals. 1/10 of the harvested grain is exported to Australia. Cereal crops are widely grown in China, Argentina, Canada, USA and European countries. Every year, 1.6 bln.t. grain is harvested. Therefore, 2/5 of it corresponds to Eastern European countries. Among grain crops, wheat, corn and rice are grown a lot. Heat, humidity and soil fertility play an important role in the germination and development of plants. Their growing season is also different. Wheat requires 1150-1700 kilocalories of heat until it germinates and ripens at +4+50C. Corn begins to ripen at +100C, and requires 2100-2900 k\k heat to ripen. Cultivation of rice is somewhat difficult compared to wheat and corn [2]. Rice germinates at +120 +150C and requires heat of 2200-3200 k\k. It is convenient to grow wheat in any regions, it can be grown in mountainous regions, plains, deserts, temperate climate and continental subtropical climate regions. Maize and rice are moisture-loving and heat-loving plants. In the countries of Western Europe, the yield is high, 36-40 centners, and in the Netherlands it reaches 55-60 centners. In developing countries, it corresponds to 14 p. The grain grown by the CIS and France in one year is 2 times more than the grain grown by the whole of Africa. A lot of wheat is grown in Argentina and Latin America. Argentine pampas do not lag behind Europe in high productivity. Rice is a labor-intensive crop, rainfall should not be less than 1500-2000 mm. This plant is widely cultivated in India, China, Thailand,



Japan, Indonesia and other countries. 230 million tons per year. rice is taken. China-180 million tons. India-110 million tons. Indonesia-45 million tons. Japan-15 mln.t. Brazil-10 mln.t. Rice is planted on 2/3 of the irrigated land in the world. Rice is grown on 2/3 of the cultivated area of Indonesia and Japan. In the Philippines, 9/10 of the area is planted with rice. As can be seen from the above information, despite the small land area, the productivity is high in countries with well-developed rice cultivation. That is why exports to other countries are high in such countries.

**Production technology.** In Uzbekistan, marsh-meadow, grassland soils are plowed at a depth of 22-25 cm, light, washed-out soils at a depth of 18-20 cm. Experiments have shown that plowing depth of more than 27 cm is ineffective even in soils with a thick fertile layer [3].

I and II class seeds of rice are planted. Planting seeds of class III reduces productivity by 10-15%. In Uzbekistan, rice is grown from seed. Rice seedlings are planted and cultivated in many countries of the world (India, China, Japan, etc.). This method is widely used in Uzbekistan for rice cultivation in the fields free from grain crops.

**Planting methods and depth.** Rice is planted in rows, rows, narrow rows, spreading and aerial spraying. The main method of sowing is planting in rows, planting 1.5-2 cm deep, then watering 5-7 cm thick. Sowing by hand is the oldest method. In this method, in farms that are not specialized in rice cultivation, in small areas, the field is soaked in water and the seeds that have been frozen or inflated are sown. Planting with machines is now common. Row spacing is 7.5 cm or 15 cm. Sowing rate. The rate of planting rice in Uzbekistan is 5-7.5 million or 150-180 kg per hectare for early-ripening varieties and 200-240 kg for late-ripening varieties. When sowing by hand, the planting rate is reduced by 10-15% [4].

**Fertilization.** In the conditions of Uzbekistan, rice absorbs 20-25 kg of nitrogen, 10-12 kg of phosphorus and 30-54 kg of potassium to produce 10 s of grain and, accordingly, straw. In our republic, rice absorbs more potassium than in other regions. In Krasnodar, 25 kg of potash is absorbed to produce 10 s of grain.

In addition to the use of green fertilizers in crop rotations, the addition of 30-40 tons of rotted manure per hectare significantly increases productivity, improves the water-physical properties of the soil, aggregate composition, makes clay soils porous, and strengthens the cohesion of sandy soils [5]. UzSHITI 45-60 kg of nitrogen, 90-100 kg of phosphorus per hectare after perennial grasses, in the second year 90-120 kg of nitrogen, 100-120 kg of phosphorus, in the third year 120-180 kg of nitrogen, 100-120 kg recommends applying phosphorus fertilizers. In the second and third years, it is advisable to apply potassium at 90-150 kg/ha. In the same institute, when 120 kg of nitrogen per hectare was applied in the form of phosphorus-potassium fertilizer, the yield increased by 48-72% compared to the control (without fertilizer), and 52-101% at 180 kg. Productivity reached 82-93 s/ha, 23-29 kg of grain was obtained for 1 kg of nitrogen.

**Watering mode.** The difference between rice and other plants is that it grows in waterlogged conditions throughout the growing season. Violation of the irrigation regime slows down the growth of the plant and causes weeds to invade the field. In the early stages of its life, the thickness of the water layer can cause the thinning of the crop, the increase of diseases and pests. The most water-demanding period of rice is from the tuber phase to milk ripening. In Uzbekistan, the air temperature is the highest during this period (July, August) [6].

**Stages of organogenesis.** 11 orthogonal stages are distinguished in rice.

The first stage - the growth cone is not stratified, there are 3 first leaves in the bush, the outer leaf is coleoptile and the next leaf is without a slap. The third leaf is a murtak leaf with a slap. This stage coincides with the beginning of germination and weeding.

The second stage - the branched stem divides and the leaf sheath is formed, leaf formation begins to end, and secondary roots begin to appear. This stage takes place between the growing season and the growing season.

The third stage is the differentiation of the growth cone. The joints of the rumen begin to form, first-order axes begin to take place, the longer this stage lasts, the more productive the rumen is. This stage takes place during the accumulation period.

The fourth stage is when the growth of the branches of the first, second and subsequent orders takes place,



the growing places of the spikes appear, and individual spikes begin to appear. By the end of the stage, the furrow reaches 1 cm. This stage corresponds to the end of the accumulation period.

The fifth stage is the differentiation of spikelets, the development of generative organs along with the formation of spikelets and lenticels and lodicules. This stage occurs at the end of the tuber period.

The sixth stage is the formation of generative tissues in the anthers and nodes, the seed bag, seed bud and pollen grains are formed. This stage occurs at the end of the tuber period.

The seventh stage is the growth of all flower spikes, pods, bracts and straw. All organs of the flower reproduce several times. This stage comes at the end of the tuber period.

The eighth stage is pollination and fertilization.

The ninth stage is the formation of the pre-sperm, the development of the shoot and the development of the endosperm. Embryonic development of the seed takes place.

The tenth stage - endosperm is formed and starch grains and aleurone layer are formed in it.

The eleventh stage is the passage of periods of complete ripening of grain, milk, wax and full ripening. Endosperm and pulp lose their moisture. (KF, Lim)

External environmental conditions can speed up or slow down the development of all stages.

In conclusion, it can be said that it is advisable to follow the recommendations given above for the cultivation of rice. Also, choosing the right place for rice cultivation and choosing varieties suitable for those conditions are considered the most correct. When planting rice, knowing the amount of NPK in the soil and using it in moderation is a guarantee of high productivity. Therefore, it is recommended to implement the fertilization rate correctly.

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