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HARVESTING THREE A YEAR TIMES IN THE FIELD IN THE CLIMATIC CONDITIONS OF THE SOUTHERN PART OF UZBEKISTAN

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Abstract:

According to the scientific article, the number of farms and homestead plots per year:-as the first main crop, the second intermediate crop, and the third secondary crop, the types of crops grown in one place and their varieties, the correct placement of their predecessors, the sequence of planting methods and terms, the yield are recorded under the climatic conditions of Surkhandarya province, located in the southern zone of Uzbekistan. The studied data on the creation and importance of the convenience of growing them in a modern way are given based on the biology of the crop species.

Keywords: Farms, plots of land, past crops, early potatoes, second (intermediate) crops, mung, vegetable corn, vegetable beans, third (repeated) crops oilseed sunflower, mung, early ripening varieties, twice a year and three times a year.

INTRODUCTION.

Cabinet of Ministers Decision No. 53, on 30 January 2020, on steps to improve the efficiency of peasant and farming companies' land plots: The country intends to address current challenges such as expanding agricultural production for local consumption and export, as well as cultivating high-yielding and high-yielding crops on farms and agricultural lands. [1:1-p.3.]

To improve the number and variety of food products, the Republic of Uzbekistan employs a variety of farming methods. Farmers and ranchers are looking for ways to make the most of their irrigated property. This leads to annual yields of two to three times per hectare. The masters of the scorching environment of Surkhandarya province, located in the country's south, lead the way in this regard. [5; 6.]

Many field crops were sown in November, carrots were gathered in April, and a new potato crop was grown in February, harvested in the first decade of May, and then sold under Surkhandarya conditions. [5;9.] Because the climatic conditions in the Surkhandarya region do not have severe and chronic cold in the winter and warm days in the spring, it is feasible to observe the state of field crops for 9 months during the growing season, with the exception of December, January, and February. The total annual effective temperature for growing crops in this region is 3600-3700 ^{0}C, and conditions for plant growth and development are sufficient for 9-10 months of the year. [6; 10; 13.] In the Surkhandarya region, carrots, onions, cabbage, and other crops are sown by the ninety-step method until December, and their grasses are harvested.These crops are unified and the first winter fertilisation is carried out.[5; 9.] Potatoes will be planted in February and the crop will be available for sale in the first decade of May. The purchase price of this product will be 2-3 times higher than in June-July. [3; 5.]

Locals claim that growing 10 tons of potatoes in one decade of May is more cost-effective than growing 30 tons of potatoes per hectare in July. Harvesting exceptionally early potatoes and other crops produces extremely high yields. Furthermore, the area will be cleared of crops at an earlier time, allowing the soil to be prepared for planting the second (intermediate) and third replanting crops, as well as other crops [6; 9.]

However, irrigated land is underutilized in the production of primary, intermediate, and secondary crops due to crop placement that ignores the biology of crop species, predecessors, and variety variability. In light of the foregoing, scientific research **should be conducted** to determine the most effective method of growing three times a year in the Surkhandarya region of southern Uzbekistan.

THE PURPOSE OF THE STUDY:

Scientific research was conducted in the Surkhandarya region, **taking into account** crop types, biology and predecessors, rapid ripening and yield of sorts, in order to effectively use irrigated land in 2018-2020, based on the

orderly placement of the sowing period of crops in the cultivation of the first high-yielding crop, second and third crops on vacant land.

MATERIALS AND METHODS:

Field experiments were conducted under irrigated conditions of G.Berdiev farm in Jarkurgan district of Surkhandarya region. The experimental area is typical gray soil, the mechanical composition is medium sandy, the depth of groundwater is 8-10m. The content of humus in the plowing layer of the soil is 1.11%, total nitrogen - 0.12%, phosphorus - 0.19%, gross potassium - 1.71%.

Experiments **on three options** were performed in the field.

The first option:-Zazora sort of potato was planted as the first (main) crop, Zilola sort of mung as the second crop, and Samarkand Agricultural Institute 20-80 variety of sunflower as the third crop.

The second option:-Surkhan-1 variety of potato was planted as the first crop, Zamin sort of vegetable (sweet) maizin corn as the second crop and Rodnik sort of sunflower as the third crop,

The third option:- Sante variety of potato was planted as the first crop, Rovot variety of vegetable bean as the second crop, and Sur variety of sunflower as the third crop. In the experiment, fast-ripening varieties and 2 reproductive seeds of all crops studied as an object were used. The area of delyanka on the studied varieties in all variants is 56 sq.m., the experiment consists of 3 repetitions. The research used the Institute of Botany of the Republic of Uzbekistan (2009), the Institute of Vegetable, Melon and Potato Crops of Uzbekistan (2011), the Institute of Cotton of Uzbekistan (2007) and generally accepted methods. In field experiments, the sequence of sowing dates, the occurrence of crop development phases, and harvesting dates are shown in **Table 1**.

Seedlings of 50-60 g size, selected for early germination of potatoes, were planted until February, and on February 10-11 (row width 0.7 m) were planted 5 seedlings per 1 pogonny meter (71.2 thousand / ha). The sown seeds were initially mulched with fine soil and manure (0.5 kg rotten) on top of it, again with soil and rotted manure on top of it (0.5 kg). Of these, the manure left between the soil warms the soil, and under its influence, the sprouted shoots at the ends are well preserved in the soil.[3; 10:] Manure on the soil protects the soil from loosening. During the first inter-row cultivation, the remaining manure on the ridge and between the soils mixes with the soil and acts as a nutrient [5; 6.] In the next period, pure nitrogen was applied to 150 kg/ha, phosphorus to 120 kg/ha, potassium to 75 kg/ha, and 4 times during the growing season.As a second crop, the seeds of the fast-ripening Zilola sort of moss were sown at a rate of 12 kg/ha.For feeding, pure nitrogen-40kg, phosphorus-50kg and potassium -55kg/ha were applied in moderation and irrigated 2 times. In the second variant, as a second crop, 5 bushes per 60 cm 1 row and 80,000 bushes per hectare were grown between rows of sweet corn. For feeding, pure nitrogen-100kg, phosphorus-100 kg and potassium 110 kg / ha were applied and irrigated 4 times. In the third option: -Vegetable beans, which are studied as a second crop, were planted in a scheme 70x10-15 cm. Fertilizing the beans with mineral fertilizers was done as well as fertilizing the mung and watered 4 times.

In the studied 1-2-3 variants, as the third crop, oily sunflowers were planted at a rate of 6 kg / ha, with a spacing of 70 cm between rows, 4 plants per meter and 57,000 bushes per hectare. For fertilization applied pure nitrogen-150kg, phosphorus-120kg and potassium-175 kg / ha 4 times watered. Other agro-technological measures were carried out as on the farm for all crops.

RESULTS OF RESEARCH:

According to the data, the mowing phase of potatoes planted in the early period (February 10-11) took place in the first days of March. Grasses that appeared in March were observed to grow well on warm and cool days of spring. Flowering phase occurred 34–36 days after weeding, that is, on April 5–6. The farms were observed to be in a state of economic maturity or commodity on May 11-13.The new crop was harvested on May 11-13.Potato tubers harvested by May 11-13 are very sweet because they are rich in nutrients, carbohydrates and nutrients, and are quickly digested when consumed.[3; 6.] The yield of tomorrow's new potatoes was 173.6-188.4 centner / ha, depending on the variety and method of sowing.The Zilola crop of mung bean, planted on May 14 as a second intermediate crop, grew well in the hot days of May, June and July. The mowing phase of the mung bean was observed on May 25, the flowering phase on July 6, and the ripening phase on July 28.Its harvest goes through the ripening phase in the third decade of July.On July 28, the harvest was 14.3 centner / ha. Instead of the second crop, on July 29, SAI 20-80 sorts of oily sunflower were planted as the third crop. The grassing phase of the sunflower took place on August 3-4.Good growth and development were observed in August and September due to favorable climatic conditions (22-24 ^{0}C) for sunflower growth[7; 13.] The flowering phase was observed on September 23-24, and the economic ripening of the seeds was observed on October 22-28, depending on the sort. Sunflower SAI 20-80 varieties have a full growth period of 85 days and the yield was -26.4 c/ha.In the second variant, the data studied on the Surkhan-1 sort of early potatoes planted as the first crop were similar to the data in the first variant.In the second variant, the milk ripening period of vegetable (sweet) corn grown as the second crop was observed in the 3rd decade of July, and the green yield was 111.5 c/ha.The yield of vegetable beans grown as a second crop in option 3 was observed on July 27 during the milk ripening period, and the yield of greens was 42.6 c/ha.

It should be noted that the grain in vegetable corn husks and vegetable bean pods was harvested in a blue state during milk ripening. Their fresh produce is consumed boiled or canned [2:,6:]The data show that for the second crop, compared to the yield of sunflower planted instead of vegetable corn (23.8c/ha), from the sunflower

sorts planted as 3 crops instead of mung and vegetable beans planted as the second crop (2.6 and 1.9 c/ha). much was harvested. This is because vegetables, beans and mung bean accumulate up to 80-90 kg of pure nitrogen from the atmosphere in one season with the help of root bacteria.[4:,13:] Therefore, these crops can be a good predecessor to sunflower.

CONCSLUSION:

In the southern Surkhandarya region of Uzbekistan, all the necessary factors were sufficient for the growth and development of the first, second and third crops planted in one place in one year.In the soil and climatic conditions of the region, the population is provided with a wide range of new agricultural products used for consumption, such as potatoes, corn, vegetables, beans and sunflower oil.

Early ripening of Sante and Surkhan-1 sorts of potatoes to be harvested three times a year on February 10, and Rovot sort of vegetable beans as the second crop instead of potatoes harvested in the first 10 days of May, and early ripening of oily sunflower SAI in the first flour day of August as the third crop. It is advisable to plant 20–80 and Sur sorts.

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Sequence of sowing period, development phases and yield of different sorts of agricultural crops 2018-220

N	Crops are planted in turn	Crop types	Types of crops	Sowing time month, day	Phases of development			Phases of development	Harvesting time, month day	Productivity center/ha.	Note
					The time of mowingmonth, day	Flowering time month, day	Cooking period month, day				
	2	3	4	5	6	7	8	9	10	11	12
1	1st crop 2nd crop 3rd crop	Potatoes Mung bean Sunflower	Zazora Zilola SAI 20-80	10.02 14.05 29,07	1.03 20.05 4,08	5.04 6.07 24.09	13.05 28.07 29,10	73 69 85	13.05 28.07 28,10	188,4 14,3 26,4	1 harvest 2 harvest 3 harvest
2	1st crop 2nd crop 3rd crop	Potatoes Vegetables Maize Sunflower	Surkhon1 Zamin Rodnik	11.02 14.05 28,07	2.03 19.05 3,08	6.047 5.07 23.09	12.05 26.07 30,10	71 68 87	13.05 27.07 29,10	173,6 111,5 23,8	1 harvest 2 harvest 3 harvest
3	1st crop 2nd crop 3rd crop	Potatoes Vegetables beans Sunflower	Sante Rovot Sur	10.02 12.05 28,07	1.03 18.05 4,08	5.047 8.07 23.09	11.05 27.07 21,10	71 68 78	11.05 27.07 22,10	182,5 42,6 25,7	1 harvest 2 harvest 3 harvet