European Journal of Agricultural and Rural Education (EJARE)
Available Online at: https://www.scholarzest.com
Vol. 5 No. 03, March 2024
ISSN: 2660-5643

PHENOLOGICAL OBSERVATIONS AND RESEARCH CONDUCTED ON THE AFRICAN MILLET PLANT.

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Article history:

Received: 04th January 2024
Accepted: 03rd March 2024

Abstract:

In this article, the origin, distribution, nutritional value of African millet cultivated in Kashkadarya province, its importance for livestock, demand for external environmental factors, nutrient unit, protein content, spread of sucking pests found in African millet, sucker He gave information on the spread of harmful insects, the effect of entomophages on plant grain, and the conduct of chemical control work against sucking pests.

Keywords: African millet, grain, green mass, water stress, salt resistance, nutrient unit, protein, pest, population, entomophagus. parasite, predator.

INTRODUCTION. Against the background of high summer temperature, low air humidity, increasing irrigation water shortage in the Republic of Uzbekistan, the abundance of different levels of saline soils, the study and introduction of drought-resistant and salt-tolerant crops into production requires. In our conditions, such a crop is African millet, which can be in demand both for strengthening the food supply and for use in the preparation of food products.

RESEARCH METHODOLOGY. Field experiments were carried out in 2023 in the experimental fields of the Kovchin department, which are irrigated by the Southern Agricultural Scientific Research Institute. Planting experiments were carried out in the first ten days of July. In 1 delyanka, crops were planted in three different thicknesses of saplings, and the area was 25 m2. Planting was carried out using a selka. Experiments were conducted in 3 repetitions. During the experiment, phenological observations, calculations and analyzes were carried out according to the method of the Scientific Research Institute of Cotton Growing of Uzbekistan, and biometric analyzes were carried out according to the method issued by the State Variety Testing Commission of Agricultural Crops (1991). The assessment of disease resistance of the variety samples studied in the experiment is evaluated in percentage (%) according to the scale developed at the International Center for Agricultural Research in the Dry Areas (International Center for Agricultural Research in the Dry Areas, 1996). The fight against weeds in crop care was carried out manually.

ANALYSIS AND RESULTS. In order to carry out the planned tasks in the scientific research work, the necessary land area was selected from the experimental field of the Southern Agricultural Research Institute, and the plots were randomly placed according to the experimental structure. To plant repeated crops, the field was first irrigated. After the soil moisture was acceptable for plowing, phosphoric and potassium fertilizers were applied according to the experimental system, and plowing was carried out on the MTZ-80 tractor at a depth of 20-22 cm. After that, the upper part of the ground was leveled and a 90 cm wide patch was taken. Planting of repeated crops was carried out on July 10, 2023. The seeds were watered so that the soil could adapt to the climatic conditions.

On September 1, the African millet plant was irrigated by agrotechnical measures. The plant was observed and changes were observed after watering. Damage by pests affecting the plant was calculated. On September 13, the roots were fertilized and watered. We observed the fruiting stage of African millet. The changes in the plant were analyzed. The number of whiteflies and other pests damaging the plant was counted. Fungicides were used against them. The mechanism of their effect was observed. Phenological observations were made. The level of chlorophyll in the leaves of each variant of the plant was studied, and the shortcomings encountered in the application of fertilizers were studied. Another necessary green mass of the plant was monitored and analyzed in laboratory conditions. The thickness of the plant, the thickness of the leaves, the weight and location of the roots were also studied. The time taken for the fertilization phase and the effect of pests that damage the fertilization were also analyzed. Necessary information on the subject has been collected. Conclusions were written. An article was submitted to a scientific journal on a new topic.

Table 1
Phenological observations conducted in field experiments.

№	Pecticide Name	Iactive substance	Consumption rate	refused	$1m^2$ plant population in number	Germination date	Ramification date	Development date	Blossom date	Ripe day,	Vegetation period, days
1.	Nazorat (without pesticide)	-	0	1	18	14.07	21.07	28.07	20.09	10.10	92
2.	Etalon (Karate)	50 g/l lyambda-sigalotrin	0,2 l/ga	1	22	14.07	23.07	29.07	23.09	10.10	91
3.	Borey Neo	Alfa-sipermetrin, 125g/l, imidaklorid, 100 g/l klotianidin, 50 g/l	0,1-0,2	1	20	16.07	22.07	30.07	22.09	10.10	90
4.	Breyk	Lyambda-sigalotrin, 100 g/l	0,07-0,1 l/ga	1	19	14.07	24.07	28.07	24.09	10.10	92
5.	Stilet	Indoksakarb, 100g/l +abamektin, 40 g/l	0,2-0,3 l/ga	1	23	15.07	21.07	27.07	29.09	10.10	90
6.	Nazorat (without pesticide)	–	0	2	20	14.07	22.07	28.07	21.09	10.10	91
7.	Etalon (Karate)	50 g/l lyambda-sigalotrin	0,2 l/ga	2	24	16.07	21.07	29.07	25.09	10.10	92
8.	Borey Neo	Alfa-sipermetrin, 125g/l, imidaklorid, 100 g/l klotianidin, 50 g/l	0,1-0,2	2	22	14.07	22.07	28.07	20.09	10.10	90
9.	Breyk	Lyambda-sigalotrin, 100 g/l	0,07-0,1 l/ga	2	18	14.07	21.07	28.07	20.09	10.10	92
10.	Stilet	Indoksakarb, 100g/l +abamektin, 40 g/l	0,2-0,3 l/ga	2	19	14.07	23.07	29.07	23.09	10.10	91
11.	Nazorat (dorilan magan)	_	0	3	20	16.07	22.07	30.07	22.09	10.10	90
12.	Etalon (Karate)	50 g/l lyambda-sigalotrin	0,2 l/ga	3	19	14.07	24.07	28.07	24.09	10.10	92

13.	Borey Neo	Alfa-sipermetrin, 125g/l, imidaklorid, 100 g/l klotianidin, 50 g/l	0,1-0,2	3	20	15.07	21.07	27.07	29.09	10.10	90
14.	Breyk	Lyambda-sigalotrin, 100 g/l	0,07-0,1 l/ga	3	20	14.07.	22.07	28.07	21.09	10.10	91
15.	Stilet	Indoksakarb, 100g/l +abamektin, 40 g/l	0,2-0,3 l/ga	3	18	16.07.	21.07	29.07	25.09	10.10	92

Table 1

Application of preparations during the fruiting period of the African millet plant (Field experiments in Karshi district)

Variations	The number of insects before spraying drugs, pcs	The number of insects after spraying drugs, pcs			
		3rd day	5th day	7th day	14th day
Nazorat (without pesticide)	38	41	46	49	52
Etalon (Karate)	39	20	12	6	2
Borey Neo	40	21	11	5	3
Breyk	39	20	12	5	3
Stilet	38	19	11	6	2

In the conducted field experiments, there were 18 bushels of African millet plants, Etalon (Karate) 22 bushels, Borey Neo 20 bushels, Break 19 bushels, Stylet 23 bushels when studying the 1st control (untreated) in 25 m2 land area and 1m2 land area. it was found that there is a native African millet plant.

IN CONCLUSION, the goal of our scientific research work is to study the development of sucking pests of African millet in Kashkadarya region and to develop the biological and economic efficiency of chemical control against them. African millet was selected and planted on the experimental plot of our Southern Agricultural Research Institute. The biological characteristics and morphology of the variety samples included in Restir were studied. The development of sucking pests of African millet in Kashkadarya region was determined. The effect of new low-toxicity fungicides against sucking pests of African millet on the quantity and quality of yield in each plot and the effect of fungicides on the development phases of African millet were determined. The biological efficiency of new low-toxic fungicides against sucking pests of African millet was determined. The biological, economic and economic efficiency of new fungicides against sucking pests of African millet was developed.

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