



THE PROCESS OF PHENOLOGICAL OBSERVATIONS OF LEGUME CROPS IN THE CLIMATE CONDITIONS OF THE SOUTHERN REGIONS

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Article history:	Abstract:
Received: 10 th February 2023 Accepted: 10 th March 2023 Published: 17 th April 2023	Despite the rapid development of science and technology in the world, the food problem remains one of the most important global problems. Due to the sharp change in the ecological situation, the area of agricultural production is shrinking and the population is increasing. Today, there are more than 7 billion people on earth, of which 3 billion live in hunger [2].

Keywords:

Despite the rapid development of science and technology in the world, the food problem remains one of the most important global problems. Due to the sharp change in the ecological situation, the area of agricultural production is shrinking and the population is increasing. Today, there are more than 7 billion people on earth, of which 3 billion live in hunger [2].

Phenological observations were made on cultivars and ridges in the competition nursery of pea cultivated in irrigated fields. According to the results of monitoring, it was observed that the transition of pea varieties and ridges to the germination phase corresponded to March 4-8. In this case, the period from the date of seed planting to germination was 23-27 days, which can be explained by the low amount of precipitation in February and the lack of moisture in the soil.

The number of sprouted plants of pea varieties and lines planted in the nursery of competitive variety testing, it was found that the average number of plants sprouted from 26 to 48 (50 seeds were sown per field) according to returns.

According to the results of phenological observations, when analyzing the transition of pea cultivars and rows to the flowering phase in the competition nursery, it was found that the period of germination and flowering was from 7 to 22 days (Table 1).

Table 1**Development periods of pea varieties and lines in the competitive variety testing nursery (Vs. 2023).**

No:	Name Of Germination,	Date Number Of Sprouted Plants,	Number Of Sprouts,	Date
1	Obod(st)	8 март	41	21 март
2	Obod	7 март	40	20 март
3	KR-20-LCAYT-RF-2	6 март	48	28 март
4	KR-20-LCAYT-RF-13	5 март	47	19 март
5	KR-20-LCPYT-RF-14	5 март	40	15 март
6	KR20-CIABN-49	7 март	45	16 март
7	Lalmikor (st)	6 март	40	15 март
8	KR20-CIDTN-07	7 март	42	14 март
9	KR20-CICTN-33	5 март	40	16 март
10	KR-20-LCAYT-RF-12	5 март	41	19 март
11	KR20-CIFWN-07	7 март	40	20 март
12	KR-20-LCPYT-RF-5	7 март	43	20 март
13	KR20-CIEN-E-06	6 март	40	21 март

14	KR20-CICTN-17	7 март	35	20 март
15	KR-20-LCAYT-RF-7	5 март	34	20 март
16	KR20-CICTN-11	7 март	33	20 март
17	KR20-CIFWN-44	6 март	40	21 март
18	KR20-CIEN-E-21	7 март	42	22 март
19	Nurli quyosh	5 март	40	20 март
20	Lalmikor	7 март	45	20 март
21	KR20-CICTN-01	5 март	31	19 март
22	KR20-CIFWN-24	5 март	30	19 март
23	KR-20-LCAYT-RF-14	6 март	26	20 март
24	KR20-CIEN-E-04	6 март	42	21 март
25	KR20-CICTN-37	5 март	36	21 март
26	KR-20-LCAYT-RF-6	4 март	30	20 март
27	KR20-CICTN-24	5 март	40	20 март
28	Obod	5 март	39	20 март
29	Obod	5 март	38	21 март
30	KR20-CIEN-E-29	5 март	36	20 март
Ўртача кўрсаткич		5 март	39	19 март
Энг баланд кўрсаткич		8 март	48	28 март
Энг паст кўрсаткич		4 март	26	14 март

It was observed that in the conditions of the Karshi district, the transition of varieties and rows of lentils in the competition nursery to the germination phase corresponded to March 7-10 on average.

When the number of germinated plants was analyzed, it was determined as a result of the analyzes that on average, from 22 to 38 seeds (50 seeds were planted in each field) were germinated according to returns (Table 2).

Table 2
Stages of development of lentil varieties and ranges (Against 2023.)

№	Номи	Униб чиқиш, сана	Униб чиққан ўсимликлар сони, дона
1	Darmon (andoza)	10 март	32
2	KR20-LIEN-E-11	09. март	35
3	KR20-LIEN-L-04	09. март	38
4	KR20-LIEN-L-16	07. март	37
5	Sarbon (andoza)	10. март	30
6	KR20-LIEN-E-13	09. март	30
7	KR20-LIEN-L-06	09. март	25
8	KR20-LIEN-L-18	09. март	27
9	KR20-LIEN-E-07	07. март	22
10	KR20-LIEN-E-18	09. март	25
11	KR20-LIEN-L-09	09. март	26
12	KR20-LIEN-L-22	07. март	30
13	KR20-LIEN-E-08	09. март	32
14	KR20-LIEN-E-25	07. март	31
15	KR20-LIEN-L-10	09. март	33
16	KR20-LIEN-L-23	08. март	23
17	KR20-LIEN-E-10	07. март	25
18	KR20-LIEN-L-01	09. март	25
19	KR20-LIEN-L-14	07. март	27
20	KR20-LIEN-L-25	09. март	29
Ўртача кўрсаткич		8 март	29

<i>Энг баланд кўрсаткич</i>	<i>10 март</i>	<i>38</i>
<i>Энг паст кўрсаткич</i>	<i>7 март</i>	<i>22</i>

According to the results of the conducted research, the number of sprouted plants of the template variety "Darmon" of lentil was 32, and the variety "Sarbon" was 35. As a result of research, it was found that there are 35 sprouted plants in the LIEN-E-11 ridge, 37 in the KR20-LIEN-L-16 ridge, and 38 in the KR20-LIEN-L-04 ridge.

Phenological observations were made on cultivars and ridges in the competitive cultivar trial nursery of Bean (Faba bian) being cultivated under conditions of irrigated fields. According to the results of monitoring, it was observed that the transition of bean varieties and rows to the germination phase corresponded to March 1-5.

According to the results of the phenological observations, when analyzing the transition of bean varieties and rows to the flowering phase in the competition nursery, it was found that the period of germination and flowering was from 7 to 15 days (Table 3).

Table 3

Stages of development of bean (faba bean) cultivars and lines in the competitive variety trial nursery (Karshi 2023).

№	Nav va tizmalar nomi	Униб чиқиш, сана	Униб чиқган ўсимликлар сони, дона	Шохланиш, сана
1	Luz de OtonoxSel. 2008 Latt. 638	1 март	32	13 март
2	Fam54B X sel2009lat.519-1	1 март	34	15 март
3	sel Ter C 154/2012 X Sel TerWS11- 124-1/2012	3 март	41	14 март
4	F4 bulk/WBR 2-7 X sel2004 latt 230.1 WF-163-1-123-1	1 мар	43	15 март
5	9303-2/2010/HBP/DSO/2	5 март	36	16 март
6	S2011,110X SEL.2008 LATT.368-2	1 март	35	14 март
7	10706-3/2010/S 98013 (DC)	3 март	24	15 март
8	10901-1/2010/Giza -	1 март	26	14 март
9	L 82 004	3 март	32	15 март
10	Misr1X SEL.2008 LATT.49LB	1 март	39	14 март
11	Fam 54B X sel2010lat.159	2 март	41	11 март
12	SAEA	5 март	43	12 март
13	KR20-FBIHTN-10	1 март	45	11 март
14	KR20-FBIHTN-16	3 март	47	14 март
15	KR20-FBIHTN-21	5 март	43	15 март
16	KR20-FBIF4N-SAEA-11	1 март	46	16 март
17	KR20-FBIHTN-6	2 март	21	12 март
18	KR20-FBIHTN-23	1 март	34	14 март
19	KR20-FBIHTN-8	1 март	35	13 март
20	KR20-FBIHTN-9	2 март	32	14 март
21	KR20-FBIHTN-16	3 март	31	11 март
22	KR20-FBIHTN-22	1 март	34	14 март
23	KR20-FBIHTN-14	5 март	36	15 март
24	KR20-FBIHTN-19	1 март	35	14 март
25	KR20-FBIHTN-11	2 март	33	14 март
<i>Ўртача кўрсаткич</i>		<i>2 март</i>	<i>36</i>	<i>13 март</i>
<i>Энг баланд кўрсаткич</i>		<i>5 март</i>	<i>47</i>	<i>16 март</i>
<i>Энг паст кўрсаткич</i>		<i>1 март</i>	<i>21</i>	<i>11 март</i>

The number of sprouted plants of the bean varieties and rows being planted in the nursery of competitive variety testing, when studying the seeds, it was found that on average, from 21 to 47 plants (50 seeds were sown per field) were sprouted. The number of sprouted plants of bean (Faba bian) varieties and rows "sel Ter C 154/2012 X Sel TerWS11- 124-1/2012", "Fam 54B X sel2010lat.159" in the rows 41, "F4 bulk/WBR 2-7 It was found that X sel2004 latt 230.1 WF-163-1-123-1" had 43 plants, and "KR20-FBIHTN-16" had the highest number of 47 germinated plants.

In order to study the resistance of leguminous grain crops to heat, drought and stress factors of the external environment, phenological observations are being carried out by planting leguminous crops in the drought-tolerant experimental field of Qamashi district.

According to the results of the phenological observation, it was determined as a result of the phenological observations that the transition to the germination phase of the 25 varieties and ridges being planted in the nursery of the control variety trial of green peas coincided with March 14-15.

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