

INFLUENCE OF IRRIGATION REGIMES AND GROWTH REGULATORS ON THE PRODUCTIVITY OF SEEDING PEAS IN THE TERSKO-SULAK SUB-PROVINCE OF DAGESTAN

M.S. MUSAEV, A.A. MAGOMEDOVA, Z.M. MUSAeva

FSBEI HE "Dagestan State Agrarian University named after M. M. Dzhambulatov"
367032, RD, Makhachkala, 180 M. Gadzhiev str.
E-mail: priem.daggau@mail.ru

The article highlights the results of studying the influence of the irrigation regime and growth regulators on the productivity of the Fokor cultivar. As a result, it was revealed that on average for 2018-2019, the leaf area of the above variety increased by 21.3%, against the background of the irrigation regime, which provides for the organization of irrigation with a pre-irrigation threshold of 80% HB. In the variant with a humidity of 70% HB, the increase was 16.4%. The applied growth regulators also influenced this indicator. Thus, in comparison with the control, when treated with the Albit regulator, the leaf surface increased in the variants with irrigation regimes, respectively, by 15.2; 22.0 and 19.9%, and on the variant with the Siliplant regulator - by 10.6; 16.6 and 16.0%. A similar situation was observed for other indicators of photosynthetic activity. The maximum yield, at the level of 3.33 t / ha, was formed by the Fokor cultivar with a pre-irrigation threshold of 80% HB, which is 41.1 and 13.6% higher than the options with thresholds of 60 and 70% HB, respectively. The applied growth regulators contributed to an increase in the yield of peas, and the maximum data were observed on plots with the Albit regulator. The yield on this option, in comparison with the control, for options with irrigation regimes increased by 26.6; 24.2; 22.2%, and in comparison with the data of the Siliplant regulator, respectively 9.2; 8.7; 7.4%.

Keywords: irrigated zone of Dagestan, sowing peas, Fokor, irrigation regime, growth regulator, yield.

REFERENCES

1. Vasin A.V. *Zernobobovyye kul'tury Srednego Povolzh'ya: monografiya* [Grain legumes of the Middle Volga region: monograph]. Samara: RITs SGSKhA/Editorial-publishing center of Samara State Agriculture Academy/, 2011. 275 p.
2. Golopyatov M.T. *Vliyaniye biologicheskikh aktivnykh veshchestv i mikroudobreniy na povysheniye i stabilizatsiyu urozhaya zerna gorokha* [Influence of biologically active substances and microfertilizers on the increase and stabilization of the grain yield of peas] // *Zernobobovyye i krupyanyye kul'tury* [Grain legumes and cereals]. 2015. No. 1. Pp. 25–29.
3. Davletov F.A. *Selektsiya neosypayushchikhsya sortov gorokha v usloviyah Yuzhnogo Urala* [Selection of non-crumbling pea varieties in the conditions of the Southern Urals]. Ufa, 2008, 236 p.
4. Davletov F.A., Popov B.K. *Selektsiya sortov gorokha dlya usloviy Yuzhnogo Urala* [Selection of pea varieties for the conditions of the Southern Urals] // *Zernovoye khozyaystvo* [Grain economy]. 2004. No. 8. Pp. 7–8.
5. Zadorin A.D. *Glavnyy istochnik vysokobelkovykh kormov* [The main source of high-protein feed] // *Kormoproizvodstvo* [Feed production]. 1994. No. 3. Pp. 9–12.
6. Zaripova L.P. *Nauchnyye osnovy ratsional'nogo ispol'zovaniya proteina v zhivotnovodstve* [Scientific basis for the rational use of protein in animal husbandry]. Kazan: FEN, 2002.
7. Zotikov V.I. *Rol' zernobobovyykh kul'tur v reshenii problemy kormovogo belka i osnovnyye napravleniya po uvelicheniyu ikh proizvodstva* [The role of leguminous crops in solving the problem of fodder protein and the main directions for increasing their production] // *Nauchnoye obespecheniye proizvodstva zernobobovyykh i krupyanyykh kul'tur: sb. nauch. tr.* [Scientific support for the production of leguminous and cereal crops: collection of articles. Scientific works.] / VNIIZBK/National Research Institute of Grain Legumes/, Orel, 2004. Pp. 256–260.
8. Ismailova M.M., Astarkhanov I.R., Musaev M.R. *Produktivnost' sortov gorokha posevnogo v usloviyah Primorsko-Kaspiyskoy podprovintsii Respubliki Dagestan* [Productivity of varieties

of sowing peas in the Primorsko-Caspian subprovince of the Republic of Dagestan] // *Izvestiya Gorskogo GAU*. 2021. No. 58 (1). Pp. 7–13.

9. Ismailova M.M., Astarkhanov I.R., Musaev M.R. *Produktivnost' sortov gorokha posevnogo v usloviyah Yuzhnogo Dagestana* [Productivity of cultivars of sowing peas in the conditions of Southern Dagestan] // *Izvestiya Kabardino-Balkarskogo nauchnogo tsentra RAN* [News of the Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences]. 2021. No. 1 (99). Pp. 37–46.

10. Ismailova M.M. *Vliyaniye regulyatorov rosta na kachestvennye pokazateli sortov gorokha v usloviyah Suleiman-Stalskogo rayona* [Influence of growth regulators on the quality indicators of pea varieties in the conditions of Suleiman-Stalsky district] // *Izvestiya Dagestanskogo GAU (Elektronnyy nauchnyy politekhnicheskiy setevoy zhurnal)* [Bulletin of the Dagestan State Agrarian University (Electronic scientific polythematic network journal)]. 2020. Issue 2 (6). Pp. 44–48.

11. Ismailova M.M., Astarkhanov I.R. *Vliyaniye regulyatorov rosta na urozhaynost' gorokha posevnogo na svetlo-kashtanovykh pochvakh Primorsko-Kaspiyskoy podprovintsii RD* [Influence of growth regulators on the yield of seed peas on light chestnut soils of the Primorsko-Caspian sub-province of RD] // *Izvestiya Dagestanskogo GAU (Elektronnyy nauchnyy politekhnicheskiy setevoy zhurnal)* [Bulletin of the Dagestan State Agrarian University (Electronic scientific polythematic network journal)]. 2020. Issue 2 (6). Pp. 48–53.

12. Ismailova M.M., Astarkhanov I.R. *Izmeneniye kachestvennykh pokazateley sortov gorokha posevnogo v zavisimosti ot primenyayemykh regulyatorov rosta* [Changes in the quality indicators of sowing pea varieties depending on the applied growth regulators] / *Aktual'nyye voprosy sovershenstvovaniya sistem zemledeliya v sovremennykh usloviyah: materialy Vserossiyskoy nauchno-prakticheskoy konferentsii (s mezhdunarodnym uchastiyem)* [Actual issues of improving farming systems in modern conditions: materials of the All-Russian scientific and practical conference (with international participation)]. Makhachkala, 2020. Pp. 152–155.

13. Ismailova M.M. *Effektivnost' vyrashchivaniya gorokha pri obrabotke regulyatorami rosta v usloviyah Suleiman-Stalskogo rayona RD* [Efficiency of growing peas when treated with growth regulators in the Suleiman - Stalsky district of the Republic of Dagestan] / *Problemy i perspektivy razvitiya organicheskogo sel'skogo khozyaystva: materialy Vserossiyskoy nauchno- prakticheskoy konferentsii* [Problems and prospects for the development of organic agriculture: materials of the All-Russian scientific and practical conference]. Makhachkala, 2020. Pp. 115–123.

14. Persikova T.F., Tsyanov A.R., Wildflush I.R. *Biologicheskiy azot v zemledelii Belarusi* [Biological nitrogen in agriculture in Belarus]. Minsk: Bel. Printing House Co "Khata", 2003. 183 p.

Information about the authors:

Musaev Makhach Saybulaevich, postgraduate student of the Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after MM Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: musaev-15@mail.ru

Magomedova Aminat Akhmedovna, Candidate of Agricultural Sciences, Associate Professor of the Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after M.M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: daggau_aminat@mail.ru

Musaeva Zarema Magomedovna, Candidate of Agricultural Sciences, Associate Professor of the Department of Land Management and Cadastres of the Federal State Budgetary Educational Institution of Higher Education "Dagestan State Agrarian University named after M. M. Dzhambulatov".

367032, RD, Makhachkala, 180 M. Gadzhiev str.

E-mail: zaremka_76@mail.ru