

Factors of effective production of oilseed flax in the forest-steppe zone of the Republic of Ingushetia

Z.M. Tsitskiev, M.U. Gambotova, A-R.A. Gazdiev,
Z.S. Batalov, S.U. Esmurziev

Ingush Research Institute of Agriculture
386203, Russia, Sunzha, 50 Oskanova street

Abstract. The article presents the results of research conducted in 2022-2023 in the forest-steppe zone of the Republic of Ingushetia to study the influence of seeding rates on the yield and quality of various breeds of oil flax. The flax culture is new for the republic and requires a thorough study of its characteristics. Therefore, research on the development of basic technological methods for cultivating this crop is relevant. The studies examined two promising breeds of oil flax – Danik and FLIZ. Phenological observations were carried out in the experimental plots, elements of the crop structure and the quality of seeds of various breeds of oil flax were analyzed. Studies have shown that growing oil flax breeds at an optimal seed sowing rate (7 million pieces/ha) has a positive effect on the formation of all elements of the crop structure, and, as a consequence, on yield. The research results show the possibility of cultivating flax in the republic. The tested breeds of oil flax formed a fairly high yield of good quality.

Keywords: flax, breeds, seeding rate, yield, quality

REFERENCES

1. Kazakov G.I., Sanin A.A., Kosykh L.A. Oil flax is a valuable and unpretentious crop. *Agro-Inform* [Agro-Inform]. 2002. No. 12. Pp. 21–23. (In Russian)
2. Smirnov L.A., Pozdnyakov B.A. et al. *L'nyanoy kompleks Rossii: faktory i usloviya effektivnogo razvitiya* [Flax complex of Russia: factors and conditions for effective development]. Moscow: Rosinformagrotekh, 2013. (In Russian)
3. Galkin F.M., Khatnyansky V.I., Tishkov N.M. et al. *Len maslichnyy: selektsiya, semenovodstvo, tekhnologiya vozdeleyvaniya i uborki* [Oil flax: selection, seed production, cultivation and harvesting technology]. Krasnodar: Vserossiyskiy nauchno-issledovatel'skiy institut maslichnykh kul'tur im. V. S. Pustovoyta, 2008. 193 p. (In Russian)
4. Lukomets V.M., Piven V.T., Tishkov N.M. et al. Oilseed flax – a promising crop. *Zashchita i karantin rasteniy* [Protection and quarantine of plants]. 2013. No. S2. P. 20. (In Russian)
5. Zelentsov S.V. History of flax culture in the world and in Russia. Oilseeds. *Nauchno-tekhnicheskiiy byulleten' VNIIMK* [Scientific and technical bulletin of VNIIMK]. 2017. No. 1(169). Pp. 93–103. (In Russian)
6. Kadyrov M.A. *Sovremennyye tekhnologii proizvodstva rasteniyevodcheskoy produktsii v Belarusi* [Modern technologies for the production of crop products in Belarus]. Minsk: IVTS Minfina, 2005. 304 p. (In Russian)
7. *Otraslevaya nauchno-tekhnicheskaya programma «Len maslichnyy» na 2012–2016 gg.* [Industrial scientific and technical program “Oil flax” for 2012–2016.]. Gosudarstvennyy komitet po nauke i tekhnologiyam Respubliki Belarus' [Electronic resource]. (In Russian)
8. Abushinova E.V. The influence of various doses of mineral fertilizers on the growth and development of oil flax in the North-Western Federal District of the Russian Federation. *Izvestiya Sankt-Peterburgskogo gosudarstvennogo agrarnogo universiteta* [News of the St. Petersburg State Agrarian University]. 2018. No. 50. Pp. 57–61. (In Russian)
9. Zhivetin V.V., Ginzburg L.N., Olshanskaya O.N. *Len i yego kompleksnoye ispol'zovaniye* [Flax and its complex use]. Moscow: Inform - Znaniye, 2002. 400 p. (In Russian)
10. Dospekhov B.A. *Metodika polevogo opyta (s osnovami statisticheskoy obrabotki rezul'tatov issledovaniy)* [Methodology of field experience (with the basics of statistical processing of research results)]. Moscow: Agropromizdat, 1985. 351 p. (In Russian)
11. Sinyakova O.V., Kolotov A.P. Oil flax harvest in the conditions of the Middle Urals.

Maslichnyye kul'tury. Nauchno-tekhnicheskiy byulleten' VNIIMK [Oil crops. Scientific and technical bulletin of VNIIMK]. 2015. Vol. 3(163). Pp. 59–62. (In Russian)

12. Brach N.B., Porokhovinova E.A., Shelenga T.V. Prospects for creating varieties of oilseed flax for specialized purposes. *Agrarnyy vestnik Yugo-Vostoka* [Agrarian Bulletin of the South-East]. 2016. No. 1–2. Pp. 50–52. (In Russian)

Information about the authors

Tsitskiev Zakre Mukharbekovich, Candidate of Agricultural Sciences, Head of the Department of "Breeding and seed production of agricultural products", Ingush Research Institute of Agriculture;

386203, Russia, Sunzha, 50 Oskanov street;

zakre.cickiev@yandex.ru, ORCID: <https://orcid.org/0009-0009-3613-9630>

Gambotova Maret Umat-girievna, Candidate of Agricultural Sciences, Leading Researcher, Ingush Research Institute of Agriculture;

386203, Russia, Sunzha, 50 Oskanov street;

maret.gambotova@bk.ru, ORCID: <https://orcid.org/0009-0001-4433-3195>

Gazdiev Abdul-Rashid Abdulkhamidovich, Junior Researcher, Ingush Research Institute of Agriculture;

386203, Russia, Sunzha, 50 Oskanov street;

Batalov Zurab Sultanovich, Junior Researcher, Ingush Research Institute of Agriculture;

386203, Russia, Sunzha, 50 Oskanov street;

niiri@ya.ru, ORCID: <https://orcid.org/0009-0001-3119-8406>

Esmurziev Sultan Usamovich, Junior Researcher, Ingush Research Institute of Agriculture;

386203, Russia, Sunzha, 50 Oskanov street;

Robinson@yandex.ru, ORCID: <https://orcid.org/0009-0002-60083394>