

WINTER WHEAT BREEDING RESULTS

**Kh.A. MALKANDUYEV¹, L.M. MOKHOVA², A.Kh. MALKANDUYEVA¹,
R.I. SHAMURZAEV¹, O.Yu. PUZYRNAYA², V.R. KERIMOV²**

¹ Institute of Agriculture –
Branch of Federal state budget scientific institution «Federal scientific center
«Kabardin-Balkar scientific center of the Russian Academy of Sciences»
360004, KBR, Nalchik, Kirov str., 224

E-mail: kbniish2007@yandex.ru

² Federal State Budget Scientific Institution
«National Center for Grain named after P.P. Lukyanenko»
350012, Krasnodar-12, Central Estate KNIISH
E-mail: kniish@kniish.ru

The article is devoted to winter soft wheat breeding in the Institute of Agricultural Sciences of the KBRC RAS, which is carried out jointly with the Federal State Budget Scientific Institution Scientific Center named after P.P. Lukyanenko within the framework of an agreement on ecological variety testing between two scientific institutions and is aimed at obtaining new highly productive varieties. As a result of the work, a new variety of winter soft wheat “Cheget” was created, the authors of which are: Romanenko A.A., Bespalova L.A., Puzyrnaya O.Yu., Kerimov V.R., Mokhova L.M., Nabokov G.D., Kuzenko M.V., Malkanduyev Kh.A., Malkanduyeva A.Kh., Shamurzaev R.I. Since 2020, the variety has been included in the State Register of Breeding Achievements of the Russian Federation.

The “Cheget” variety was created by backcrossing a line of mutant origin 86KPM 684 with the “Fortuna” variety, followed by mass and individual selection in F₂ and F₃. Designed for cultivation for food purposes, its growing season is 249 days, plant height 84cm, winter hardiness with artificial freezing - 70%. Resistant to spring frost and drought. The “Cheget” variety has a high stable yield, resistance to lodging, and is distinguished by its baking quality. The mass of 1000 grains is 38.4 g, the grain nature is 787 g / l, the glassiness is 51%, the gluten content is 26.2%, the crude protein content is 13.6%. The variety is highly immune to major diseases: it is not affected by dusty and hard smut, brown, yellow and stem rust. In some years, the maximum yield for the “Cheget” variety under the conditions of Krasnodar in the competitive variety testing of the NCP named after P.P. Lukyanenko, according to the predecessor of corn for grain, reached 113.3 c / ha. It is recommended to sow at the optimum sowing time, on a high and medium agricultural background. Patent No. 10770, Russian Federation, selection achievement, winter soft wheat “Cheget”, CI / applicants: 25, 19620; application No. 8559197; published 1/15/2020, Bulletin No. 1 (251), part IV, t. IV. 5. 4 s.

Keywords: winter wheat, variety, yield, nature and mass of grain, grain quality, protein and gluten content.

REFERENCES

1. Beltyukov L.P. *Sort, tekhnologiya, urozhay* [Variety, technology, harvest]. Rostov-on-Don, 2002. Pp. 15-20.
2. Malkanduyev Kh.A., Ashkhotov A.M., Malkanduyeva A.Kh. *Sravnitel'naya otsenka novogo vysokoproduktivnogo sorta myagkoy ozimoy pshenitsy Yuzhanka na sortouchastkakh Rostovskoy oblasti, Adygeii, Kabardino-Balkarii* [Comparative evaluation of a new highly productive variety of soft winter wheat Yuzhanka on cultivar plots in the Rostov Region, Adygea and Kabardino-Balkaria] // *Agrarnyy vestnik Urala* [Agrarian Bulletin of the Urals]. 2012. N. 9 (99). Pp. 11-13.
3. Karaulniy D.V., Masterov A.S., Shevaldin I.N. *Ocenka novykh sortov osimoy pshenitsy po kriteriyam adaptivnosti* [Evaluation of new varieties of winter wheat by adaptability criteria] // *Vestnik Belorusskoy GSHA* [Bulletin of the Belarusian State Agricultural Academy]. 2016. No. 3. Pp. 60-63.

4. Ivanova I.Yu., Ilyina S.V. *Cennye dlya selekcyi obrazcy yarovoy myagkoy pshenitsy* [Valuable samples of spring soft wheat for selection] // *Vestnik Maryiskogo gosudarstvennogo universiteta* [Bulletin of Mari State University]. 2018. V. 4. № 3. Pp. 32-36.
5. Torbina I.V. *Novyi sort ozimoy pshenitsy Italmas* [A new variety of winter wheat Italmas] // *Vestnik Maryiskogo gosudarstvennogo universiteta* [Bulletin of the Mari State University]. 2019. T. 5. № 4. Pp. 424-430.
6. Bespalova L.M., Romanenko A.A., Kudryashov I.N., Ablova I.B. and other. *Sorta pshenitsy i tritikale* [Varieties of wheat and triticale]. Krasnodar, 2018. 158 p.
7. *Metodika gosudarstvennogo sortoispytaniya sel'skokhozyaystvennykh kul'tur* [Methodology of the State variety testing of crops]. M., 1989. Issue 2. 194 p.
8. *Metodicheskiye ukazaniya po ekologicheskomu sortoispytaniyu zernovykh kul'tur* [Methodological guidelines for the ecological variety testing of grain crops]. Krasnodar: The National Grain Center named after P.P. Lukyanenko, 1985. 15 p.
9. Dosphehov B.A. *Metodika polevogo opyta* [Methodology of field experience]. M.: Agropromizdat, 1985. 352 p.
10. *Pshenitsa myagkaya ozimaya*: Pat. No. 10770 Russian Federation; declared No. 8559197; publ. 01/15/2020, Bull. No. 1 (p. IV t. IV. 5.). 4 p.

Malkanduyev Hamid Alievich, Doctor of Agricultural Sciences, Senior Researcher Institute of Agriculture – Branch of Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

Ph. 8-903-493-41-35.

E-mail: kbniish2007@yandex.ru

Mokhova Lyubov Mikhailovna, Candidate of Agricultural Sciences, senior researcher Federal State Budgetary Institution "Scientific Center named after P.P. Lukyanenko".

350012, Krasnodar-12, Central Estate KNIISH.

Ph. 8-938-414-39-49.

E-mail: kniish@kniish.ru

Malkanduyeva Aminat Khamidovna, Candidate of Agricultural Sciences, senior researcher Institute of Agriculture – Branch of Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

Ph. 8-903-490-90-93.

E-mail: malkandyewaax@mail.ru

Shamurzaev Rustam Ilyasovich, Candidate of Agricultural Sciences, senior researcher Institute of Agriculture – Branch of Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

Ph. 8-905-436-46-86.

E-mail: tama8333@mail.ru

Puzyrnaya Olga Yuryevna, Candidate of Agricultural Sciences, senior researcher Federal State Budgetary Institution "Scientific Center named after P.P. Lukyanenko".

350012, Krasnodar-12, Central Estate KNIISH.

Ph. 8-861-222-69-15.

E-mail: kniish@kniish.ru

Kerimov Vagif Rakhmetovich, Candidate of Agricultural Sciences, deputy director for seed production and marketing, Federal State Budget Scientific Educational Institution "Scientific Center named after P.P. Lukyanenko".

350012, Krasnodar-12, Central Estate KNIISH.

Ph. 8-861-222-15-61.

E-mail: kniish@kniish.ru