

CHANGE OF SEEDAL QUALITY OF WINTER WHEAT GRAIN IN THE PERIOD OF POST- HARVEST RIPENING

**Kh.A. MALKANDUYEV¹, M.A. BAZGIEV², A.Kh. MALKANDUYEVA¹,
R.I. SHAMURZAEV¹, K.Sh. BADURGOVA²**

¹Institute of Agriculture –
branch of Federal state budget scientific establishment "Federal scientific center
"Kabardin-Balkar Scientific Center of the Russian Academy of Sciences"
360004, KBR, Nalchik, 224, Kirov street
kbniish2007@yandex.ru

²The Ingush Research Institute of Agriculture
386203, RI, Sunzhasettlement,. Oskanova street, 50
E-mail: ishos06@mail.ru

The article presents the results of studies on the effect of timing and methods of harvesting and post-harvest maturation on the seed quality of winter wheat grains. The use of seeds for sowing, with a short storage and post-harvest ripening, is of interest for determining the duration of post-harvest ripening. Studies were conducted in conditions of insufficient moisture (steppe zone) of Kabardino-Balkaria in 2001–2003. on the winter wheat variety Knyazhna. The variety is entered in the State Register of Breeding Achievements of the Russian Federation and allowed for cultivation in 6 regions.

The cleaning was carried out in the following phases of ripeness: beginning, middle and end of wax, full ripeness and standing at the vine, threshed 5 and 10 days after harvesting. In the phases of the beginning, middle and end of wax ripeness, the cleaning was carried out in a separate way, into full ripeness, and when it was planted at the root - by direct combining.

One of the parameters characterizing the seed properties are: growth energy, germination and growth power. Growth energy and germination were determined according to GOST 12038–84 "Crop seeds. Methods for determining the germination". In the course of the research, optimal terms of post-harvest ripening of seeds were determined, on average, 37–57 days. The maximum values of germination and energy obtained from the grain harvested in the phases of the end of wax - full ripeness, early harvesting does not contribute to obtaining high-quality seeds. The seeds had a high germination in 1-2 months after threshing. After a period of post-harvest ripening, seed quality improves - germination energy and germination rates increase by 29 and 31%, respectively.

Keywords: winter wheat, seeds, ripening phases, harvesting time, germination energy, germination capacity, growth force.

REFERENCES

1. Igolnikova L.V., Neymysheva A.N. *Posevnyye i sortovyye kachestva semyan – garant vysokikh urozhayev* [Sowing and varietal quality of seeds - the guarantor of high yields // *Nauchno-agronomicheskii zhurnal* [Scientific and agronomic journal]. 2012. № 2.1 (92). Pp. 47-49.
2. Batueva I.V., Eliseyev S.L., Yarkova N.N. *Vliyaniye sroka uborki i desikatsii na urozhaynost' i posleuborochnoye dozrevaniye semyan ozimoy pshenitsy v srednem Predural'ye* [Influence of the term of harvesting and desiccation on the yield and post-harvest maturation of winter wheat seeds in the Pre - Urals // *Izvestiya OGAU*. 2014. № 6 (50). Pp. 27-30.
3. Malkandueva A.Kh. *Formirovaniye urozhaya i kachestva zerna ozimoy pshenitsy v protsesse sozrevaniya v usloviyakh Kabardino-Balkarii: dis.... kand. sel'snauk: 06.01.09* [Formation of the

yield and grain quality of winter wheat in the process of maturation conditions of Kabardino-Balkaria: Thesis for Candidate of Agricultural Sciences: 1/6/09. Nalchik, 2004. 158 p.

4. Gurinovich O.I. *Vliyaniye usloviy vyrashchivaniya na prodolzhitel'nost' perioda posleuborochnogo dozrevaniya semyan yarovoy pshenitsy* [The effect of growing conditions on the length of the period of post-harvest ripening of seeds of spring wheat // Leningrad. Agricultural Institute, 1968. № 2 (124). 180 p.

5. Arkhangelsky S.F., Lyfenko S.F., Shelepov V.V. *Opredeleniye sily nachal'nogo rosta kak metod biologicheskoy otsenki kachestva semyan* [Determination of the initial growth strength as a method of biological assessment of seed quality] // *Voprosy genetiki, selektsii i semenovodstva* [Issues of genetics, breeding and seed production]. M., 1966. Vol. 7. P. 180-193.

Malkanduev Hamid Alievich, Doctor of agricultural sciences, Institute of Agriculture - a branch of the 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

Bazgiev Magomed Alaudinovich, Candidate of agricultural sciences, Ingush Research Institute of Agriculture.

386203, RI, Sunzha settlement, Oskanova street, 50.

Ph. 8-928-920-27-54.

E-mail: ishos06@mail.ru

Malkanduyeva Aminat Khamidovna, Candidate of agricultural sciences, Institute of Agriculture - a branch of the Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

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

E-mail: kbniish2007@yandex.ru

Shamurzaev Rustam Ilyasovich, Candidate of agricultural sciences, Institute of Agriculture - a branch of the Kabardino-Balkarian Scientific Center of the Russian Academy of Sciences.

360004, KBR, Nalchik, Kirov street, 224.

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

E-mail: kbniish2007@yandex.ru

Badurgova Kulsum Shoidovna, Candidate of agricultural sciences, Ingush Research Institute of Agriculture.

386203, RI, Sunzha settlement, Oskanova stree, 50.

Ph. 8-928-746-57-43.

E-mail: ishos06@mail.ru