

FORMATION OF YIELD AND QUALITY OF TUBERS OF POTATO VARIETIES DEPENDING ON HARVESTING TIME IN NORTHERN FOREST-STEPPE OF TYUMEN REGION

A.A. KAZAK, Yu.P. LOGINOV, A.S. GAIZATULIN, V.V. ZHIGADLO

Northern Trans-Ural State Agricultural University
625003, Russia, Tyumen, 7 Republics street

Annotation. In this article the dynamics of the formation of early potatoes and recommended varieties with an early yield for further production testing in the northern forest-steppe of the Tyumen region are studied. Research was carried out in the western part of the forest-steppe zone of the Tyumen region on the experimental field of the Agrotechnological Institute of the State Agrarian University of the Northern Trans-Urals according to generally accepted methods. With the first and second digging up, the Charoit variety stood out in terms of yield, its yield was 15.1 and 23.9 tons/ha, respectively, which is 3.4 and 4.5 tons/ha higher than the standard Zhukovsky early variety. With the third digging, the maximum yield (31.8 tons/ha) was produced by the Northern variety. Variety Charoit and Severny contained 16.4 and 16.9% starch in tubers, standard variety - 13.2. The taste rating of the standard Zhukovsky early variety was 3.4 points, Charoit and Severny exceeded the latter by 0.7-1.2 points. The marked varieties were better than the standard in winter. Charoit and Severny varieties were economically more profitable, the level of profitability was 213 and 169 %, which is 13-57% higher than the standard variety. These classes are recommended for inclusion in the production test.

Keywords: Tyumen region, potatoes, yield, early ripe varieties, cleaning period

REFERENCES

1. Vasiliev A.A., Dergileva T.T., Dergilev V.P. Assessment of the adaptive potential of the potato collection of the South Ural Research Institute of Horticulture and Potato Growing. *APK Rossii* [Agro-Industrial Complex of Russia]. 2020. Vol. 27. No. 2. Pp. 257–265. (In Russian)
2. Kazak A.A., Loginov Yu.P., Sidorov P.T. Growing environmentally friendly potatoes in the forest-steppe zone of the Tyumen region. *Vestnik Kurganskoy GSKHA* [Bulletin of the Kurgan State Agricultural Academy]. 2018. No. 1 (25). Pp. 31–34. (In Russian)
3. Shakhova O.A. Changes in the agrophysical properties of gray forest soil during various types of autumn cultivation in the northern forest-steppe of the Tyumen region. *Vestnik Michurinskogo gosudarstvennogo agrarnogo universiteta* [Bulletin of Michurinsk State Agrarian University]. 2021. No. 3 (66). Pp. 33–37. (In Russian)
4. Rzyayeva V.V. The influence of agrotechnical practices on the productivity of crops, crop rotation. *Izvestiya Orenburgskogo gosudarstvennogo agrarnogo universiteta* [News of Orenburg State Agrarian University]. 2019. No. 4 (78). Pp. 18–20. (In Russian)
5. Kazak A.A., Loginov Yu.P., Gaizatulin A.S. Structural elements and yield of VIR potato hybrids in the northern forest-steppe of the Tyumen region. *Vestnik Michurinskogo gosudarstvennogo agrarnogo universiteta* [Bulletin of Michurinsk State Agrarian University]. 2020. No. 4 (63). Pp. 50–53. (In Russian)
6. Loginov Yu.P., Kazak A.A., Yakubysheva L.I. Productivity and quality of tubers of early-ripe potato varieties of domestic selection in the northern forest-steppe of the Tyumen region. *Agroproduktivnost' i politika Rossii* [Agro-food policy of Russia]. 2017. No. 12 (72). Pp. 93–101. (In Russian)
7. *Metodika Gosudarstvennogo sortoispytaniya sel'skokhozyaystvennykh kul'tur* [Methodology of the State variety testing of agricultural crops]. Moscow, 1997. 216 p. (In Russian)
8. Dospekhov B.A. *Metodika polevogo opyta* [Field experiment technique]. Moscow: Agropromizdat, 1985. 351 p. (In Russian)
9. Renyov N.O., Shakhova O.A. Features of the formation of the yield of early-maturing potato varieties in the northern forest-steppe of the Tyumen region. *Vestnik Michurinskogo*

gosudarstvennogo agrarnogo universiteta [Bulletin of Michurinsk State Agrarian University]. 2020. No. 4 (63). Pp. 80–83. (In Russian)

10. Gayzatulin A.S., Mityushkin A.V., Zhuravlev A.A., Mityushkin A.V., Salyukov S.S., Ovechkin S.V., Simakov E.A. Selection and evaluation of starting material in potato breeding for suitability for processing. *Kartofel' i ovoshchi* [Potatoes and vegetables]. 2019. No. 7. Pp. 36–40. (In Russian)

11. Zhigadlo V.V. *Dinamika formirovaniya urozhaynosti rannespelykh sortov kartofelya v severnoy lesostepi Tyumenskoy oblasti: vypusknaya kvalifikatsionnaya rabota* [The dynamics of the formation of the yield of early-maturing potato varieties in the northern forest-steppe of the Tyumen region: final qualification work]. Tyumen: GAU Northern Trans-Urals. 58 p. (In Russian)

Information about the authors

Kazak Anastasia Afanasyevna, Doctor of Agricultural Sciences, Associate Professor, Head of the Department of biotechnology and breeding in crop production, Northern Trans-Ural State Agricultural University;

625041, Russia, Tyumen, 2 Roshchinskoye Shosse street, building 13;

kazakaa@gausz.ru, ORCID: <http://orcid.org/0000-0002-0563-3806>

Loginov Yuri Pavlovich, Doctor of Agricultural Sciences, Professor, Department of biotechnology and breeding in crop production, Northern Trans-Ural State Agricultural University;

625041, Russia, Tyumen, 18 Roshchinskoye Shosse street;

loginov.yup@gausz.ru, ORCID: <http://orcid.org/0000-0002-2372-9350>

Gayzatulin Andrei Sergeevich, postgraduate student of the Department of biotechnology and breeding in crop production, Northern Trans-Ural State Agricultural University;

625041, Russia, Tyumen, 18 Roshchinskoye Shosse street;

gajzatulinas.20@ati.gausz.ru, ORCID: <https://orcid.org/0000-0001-6026-0371>

Zhigadlo Vladimir Valerievich, agronomy student, Northern Trans-Ural State Agricultural University;

625041, Russia, Tyumen, 18 Roshchinskoye Shosse street;

zhigadlo.vv@ati.gausz.ru