

I. Kimeichuk, Assistant Lecturer  
(Bila Tserkva National Agrarian University, Bila Tserkva, Ukraine);  
S. Rabko, Head of the Department, PhD;  
L. Paplauskaya, Assistant Professor PhD; P. Tupik, Assistant Professor PhD  
(Belarusian State Technological University, Minsk, Belarus)

### GROWTH OF CLIMATIC TYPES OF PINE ORDINARY IN THE CONDITIONS OF THE KYIV FOREST OF UKRAINE

A study of the growth of 39-year-old climatic ecotypes of Scots pine of various origins growing on the territory of Ukraine has been conducted.

Table data show that the trees of most variants are mostly in excellent condition, with the exception of the Lviv and Voronezh origins, whose trunks were damaged by snow plows in 2012–2013.

**Table – The influence of collection sites on the state of pine trees of different climate types of 39-year-old ecological and geographical cultures in the conditions of a fresh collection of Kyiv Polyssia**

No z/p	Place of collection, region	Latitude (N)	Longitude (W)	HHeig htn.r. m., m	Share of trees by condition, %			Savings, % condition index
					excel- lent	satisfac- tory	unsatis- f-actory	
1	Western Polissia, Volyn region	51°27'	24°13'	161	58.0	31.9	10.1	<u>55.5</u> 1.5
2	Central Polissia, Zhytomyr region	51°14'	28°52'	126	87.7	4.1	8.2	<u>75.0</u> 1.2
3	Eastern Polissia, Chernihiv region	52°07'	32°44'	145	67.6	26.2	6.2	<u>77.0</u> 1.4
4	Western Forest Steppe, Lviv region	50°13'	24°42'	221	40.0	10.9	49.1	<u>40.0</u> 2.2
5	Right-bank forest- steppe, Cherkasy region	49°30'	31°59'	80	78.6	11.4	10.0	<u>48.0</u> 1.3
6	Kyiv Polissia, Kyiv region	50°16'	30°8'	190	64.6	20.0	15.4	<u>48.0</u> 1.5
7	Livoberezhny Lisostep, Sumy region	50°38'	34°40'	114	53.5	36.2	10.3	<u>60.0</u> 1.6
8	Step, Luhansk region	48°32'	39°28'	110	51.7	43.1	5.2	<u>56.5</u> 1.6
9	Eastern Polissia, Gomel region	52°27'	30°52'	132	76.6	12.5	10.9	<u>62.5</u> 1.3
10	Lisostep, Russia, Voro- nezh region	51°35'	39°12'	120	49.3	15.9	34.8	<u>60.0</u> 1.9

The results of the research show that the climate types of the pine of Polissia and western forest-steppe origin are more adapted to the conditions of Kyiv Polissia with the local climate [1, 2].

At the same time, the Steppe climate type is better preserved, since it is this variant that has preserved the most trees. This fact substantiates the prospects of using climate types of steppe origin during a sharp climate change. It is these options that will suffer the least from the effects of negative factors. Therefore, in the future it is advisable to find such climate types, the offspring of which would show resistance to negative influences at the initial stage. The research of this object as a whole confirms the correctness of the conclusion that Scots pine cultures from the seeds of the Polish lowland and the Baltic region have an advantage over other origins planted on the territory of Europe.

This can be explained by the significant heterozygosity of the pine from Polissia, since it was formed after the retreat of the glacier as a result of the fusion of previously isolated parts of the range [3–5].

#### REFERENCE

1. To develop a forecast of the state of the environment in Belarus for the period up to 2035: research report (concluding): Institute of Nature Management of the National Academy of Sciences of Belarus; hands Ly-senko S.A.; performer Khomich V.S. [and etc.]. Minsk, 2020. 512 p. No. GR 20192690.
2. Rabko, S.U., Poplavskaya, L.F., Lamotkin, S.A., Kimeichuk, I.V., Khryk, V.M., Yukhnovskyi, V.Yu. Content of the main components of essential oil in the needles of scots pine growing in geographic cultures. *Ukrainian journal of forest and wood science*. 2021. Vol. 12. № 2. C. 58–70. <https://doi.org/10.31548/forest2021.02.006>.
3. Kimeichuk I.V. Assessment of the perspective of using ecological and geographical cultures in the conditions of climate change. *Scientific bulletin of NUBiP of Ukraine*. 2018. Issue 288. P. 49–59.
4. Prozherina N.A., Nakvasina E.N. Climate change and its impact on adaptation and intraspecific variability of conifers of the European North of Russia. *Izvestiya vuzov. Forest magazine*. 2022. No. 2. P. 9–25. <https://doi.org/10.37482/0536-1036-2022-2-9-25>.
5. Reforestation and forest reclamation in Ukraine: origins, current state, current challenges and prospects in the conditions of the Anthropocene: monograph. K. 2019. 350 p.