

впливає не тільки температура березня, а й період, що передує цвітінню. Низькі температури в лютому 2025 року (-5,0 °C) могли негативно вплинути на загальний темп підготовки до цвітіння. Початок цвітіння *Acer platanoides* в 2023 році було зафіксовано 09.04, що корелює з помірними температурами квітня (+10,9 °C) та достатнім теплом березня (+6,3 °C). При цьому цвітіння відбувалося в умовах достатнього забезпечення дерев вологою у квітні (84 мм опадів), що було найбільш сприятливим для високої продуктивності та успішного плодоношення.

Отже, проведений комплексний аналіз кліматичних показників 2022–2025 років свідчить про аридизацію клімату, що є довгостроковою загрозою для стійкості міських паркових дендроценозів в умовах північно-степової зони України. В результаті досліджень виявлено високу фенологічну пластичність *Acer platanoides* у відповідь на позитивні температурні аномалії зимово-весняного періоду. Визначено тенденцію до зміщення термінів настання весняних фенофаз на більш ранні дати, що спричиняє фенологічний дисбаланс та підвищує вразливість виду до сучасної кліматичної нестабільності.

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GROWTH PARAMETERS OF *LEPIDIUM SATIVUM* L. AS MARKERS OF RESISTANCE TO THE ACTION OF SYNTHESIZED THIAZOLYL ACETIC ACID DERIVATIVE

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Plants sensitive to stress are *Lepidium sativum* L. [1–3] and *Sinapis alba* L. [4–6]. The properties of regulating plant growth are known, in particular, for thiazolyl acetic acid derivatives [7]. The aim of this work was to study the growth-regulating properties of a new synthesized derivative with an aminoalkyl fragment in a growth test with *L. sativum* and *S. alba*.

The derivative 2-[2-(N-tert-butoxycarbonyl)-3-aminoethyl-1,3-thiazol-4-yl]acetic acid was first synthesized by heterocyclization of the thioamide obtained from the corresponding nitrile with ethyl-4-chloroacetoacetate. The structure of the compound was proven by ^1H NMR-spectroscopy and chromatographic mass spectrometric analysis. The study used aqueous solutions of the compound with a concentration of 0.001%, 0.01% and 0.1%. Growth-regulatory properties were evaluated by growth test with *L. sativum* and *S. alba*, using the generally accepted method and determining the energy of seed germination, seed germination, root and stem length of seedlings [8]. The results were statistically processed.

It was established that such indicators as germination energy and seed germination did not differ from the control values of test plants for all investigated variants of the compound concentration. However, the length of the roots and stems of test plants was significantly less than in the control, under the action of the compound at a 0.1% concentration. With a decrease in the concentration of the compound, the indicator of root and stem length was at the same level as the control for *L. sativum* under the action of solutions of the compound at 0.01% and 0.001% concentrations. A similar situation was observed for *S. alba*, however, at a concentration of 0.001%, a slight stimulation of plant stem growth was noted. A hormetic dose-dependent response of root/shoot ratio of *L. sativum* was observed under the influence of researched compound: at a concentration of 1000 $\mu\text{g/ml}$ – inhibition of this indicator; at a concentration of 100 $\mu\text{g/ml}$ – no changes compared to the control; at a concentration of 10 $\mu\text{g/ml}$ – stimulation.

Therefore, the studied thiazolyl acetic acid derivative showed herbicidal properties at a concentration of 0.1% and showed signs of a two-phase dose-dependent relationship, which can be determined by further studies using lower concentrations.

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