



Česká zemědělská
univerzita v Praze



Czech University of Life Sciences Prague

&

Institute of Forest Ecology, Slovak Academy of Sciences

cordially invite you

to the international conference

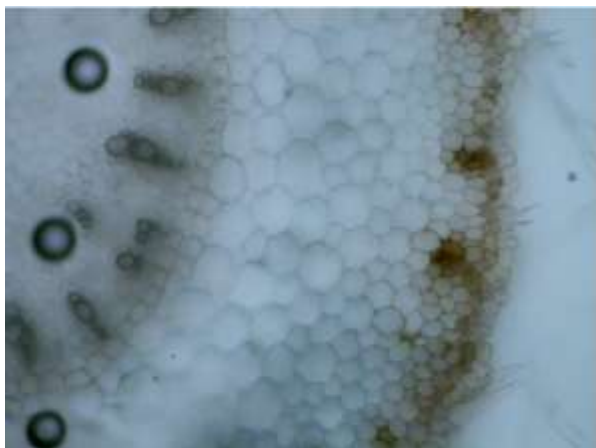
**Influence of abiotic and biotic stressors
on plant properties 2026**

focusing on

Root System Responses to Stress – Anatomical and Morphological Changes

to be held on

**9–10 September 2026 at the conference hall of the Institute of Forest Ecology,
Slovak Academy of Sciences, v.v.i., Zvolen**



Second Circular

We are pleased to invite you to the traditional international conference organized by the Institute of Forest Ecology of the Slovak Academy of Sciences and the Czech University of Life Sciences Prague. The conference aims to present the latest results of both theoretical and applied research in the field of plant stress physiology, including the application of research findings in plant breeding, cultivation, and protection.

An integral part of the conference is the presentation of modern instrumentation used for monitoring not only physiological parameters but also genetic markers and biologically active compounds that mitigate the effects of environmental stress factors on plants.

The main theme of the conference will be: **Root System Responses to Stress – Anatomical and Morphological Changes**. Invited lectures will be announced in the Second Circular.

Invited Lectures

B. Šerá: Proportionality in Underground Plant Organs

P. Ferus: The Potential of Regenerative Agroforestry Approaches in Mitigating Stress in Field Crops: A Model Based on Black Locust (*Robinia pseudoacacia* L.) and Lavender (*Lavandula angustifolia* Mill.)

J. Ševčíková, J. Tomaškin: Effects of Compost Application on Selected Physiological and Production Characteristics of Tomato (*Solanum lycopersicum* L.)

F. Hnilička et al.: Root System Responses to Stress

A peer-reviewed conference proceedings volume containing full scientific papers will be published online. The proceedings are indexed in the CAB Abstracts database.

Organizing Committee

RNDr. Ľubica Ditmarová, PhD.

prof. Ing. František Hnilička, Ph.D.

Ing. Helena Hniličková, Ph.D.

Ing. Margita Kuklová, CSc.

Ing. Katarina Sládeková

Ing. Hana Húdoková, PhD.

Correspondence Address

Ing. Margita Kuklová, CSc.

Ústav ekológie lesa Slovenskej akadémie vied, v.v.i.

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e-mail: kuklova@ife.sk

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prof. Ing František Hnilička, Ph.D.

Česká zemědělská univerzita v Praze

Fakulta agrobiologie, potravinových a přírodních zdrojů

Katedra botaniky a fyziologie rostlin

Kamýcká 127, Praha – Suchbátka 165 21, ČR

e-mail: hnlicka@af.czu.cz

tel.: +420 224 382 519

VENUE

Conference Hall. Institute of Forest Ecology, Slovak Academy of Sciences, v.v.i, Zvolen, Slovakia

Official Languages: Czech, Slovak, English

Presentation Formats: oral presentation, poster presentation, company presentation

REGISTRATION FEE

Registration fee: 2500,- CZK (120,- €); for PhD students: 2000,- CZK (80,- €) includes conference materials, refreshments. The fee will be paid in advance by bank transfer. In case of non-payment of the deposit fee, the paper will be discarded. Please indicate in the message to the recipient the names of the persons for whom the contribution fee is paid.

Payment:

Participants from the Czech Republic

Zemědělská společnost při ČZU v Praze. Pobočka FYTO

Česká zemědělská univerzita – FAPPZ

Kamýcká 129, 165 21 Praha – Suchbát

ID No.: 75087189

VAT No.: we are not VAT payers

Bank connection: Česká spořitelna, a.s.,

account no.: 0145830339/0800

When making the payment, please indicate for whom the fee is being paid.

IBAN: CZ5808000000000145830339

SWIFT CODE: GBACZPX

Participants from Slovakia

Ústav ekológie lesa Slovenskej akadémie vied, v.v.i.

L. Štúra 2, 960 01 Zvolen

ID No.: 00679071

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IBAN: SK38 8180 0000 0070 0066 7974

Variable symbol: 09100926

Constant symbol: 0308

Tax documents will be handed over to the participants at the presentation.

In justified cases (upon agreement with the organizers) it will be possible to pay the registration fee at the conference venue.

Accommodation:

Accommodation will be arranged individually by each participant.

Several hotels and guesthouses are located near the Institute of Forest Ecology:

Hotel Poľana – <http://www.hotelpolana.sk>

Hotel Franko – <http://www.frankohotel.sk>

Penzión Almada – <https://www.almada.sk>

Hotel Tennis – <https://www.hoteltenis.sk>

Victoria – Penzion & Restaurant

Hotel Academic Zvolen

Accommodation at the Technical University in Zvolen

Subject to availability, the Student Residence Hall of the Technical University in Zvolen provides accommodation for the general public, external students of the Technical University in Zvolen, and students from other universities in Slovakia and abroad.

Contact person: Ing. Miroslava Cibulová

Tel.: +421 455 206 604

E-mail: cibulova@tuzvo.sk

Due to limited accommodation capacity, early reservations are strongly recommended.

IMPORTANT DATES

12 July 2026 – Distribution of the Second Circular with instructions for authors

5 August 2026 – Extended deadline for submission of registration forms

15 August 2026 – Deadline for submission of manuscripts to: hnilicka@af.czu.cz

30 August 2026 – Deadline for submitting revised papers after peer review

12 July 2026 – Deadline for payment of registration fee for participants presenting a contribution

20 July 2026 – Deadline for payment of registration fee for participants without a contribution.

ADDITIONAL INFORMATION

⇒ *The completed and signed registration form should be submitted electronically (DOC, RTF, or PDF format) by 30 June 2026 to: hnilicka@af.czu.cz*

⇒ *The standard presentation length is 15 minutes plus 5 minutes for discussion. For presentations reporting significant results, such as summaries of doctoral dissertations, habilitation theses, comprehensive reviews of current topics, or invited lectures, the Organizing Committee may allocate 25 minutes plus 5 minutes for discussion.*

⇒ *Papers submitted to the conference proceedings, including an English abstract, should not exceed six pages. Papers accompanying plenary lectures should not exceed ten pages. Since the proceedings will be published electronically, these page limits are recommended rather than mandatory.*

⇒ *On the second conference day, refreshments will be provided in the form of a cold buffet and an extended coffee break. This arrangement has been chosen in view of the shorter programme on the second day.*

CONTACT:

hnilicka@af.czu.cz or tel.: + 420 224 382 519,

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Influence of abiotic and biotic stressors on plant properties 2026

REGISTRATION FORM – STRESSES 2026

Name, surname, academic title(s):			
Full name and address of institution (including postal code):			
Billing address (if different from institutional address):			
ID No:		Vat no:	e-mail:
Oral presentation* yes* no*	Poster* yes* no*	Proceedings paper only * yes* no*	Participation without contribution* yes* no*
Authors (<i>underline the presenting author</i>)			
Title of contribution:			
I would like lunch:		on 9 September 2026	
		yes* no*	
I would like to attend the conference dinner:		yes* No*	
Date:		Signature:	

* Delete as appropriate

INSTRUCTIONS FOR AUTHORS

Authors are kindly requested to submit their papers in **Microsoft Word (.doc, .docx) or PDF format**. The manuscript should include all figures, graphs, tables and photographs. Alternatively, authors may indicate the intended position of figures, tables and photographs within the manuscript, while supplying the corresponding numbered files separately.

Manuscript Formatting: Page size: A4, Top margin: **2.5 cm**, Bottom margin: **2.5 cm**, Left margin: **2.5 cm** and Right margin: **2.5 cm**.

Figures and Tables: Figures should be numbered consecutively. Figure captions should be placed below the figures. Table titles should be placed above the tables. All figures and tables must be cited in the text. Images should be of publication quality (minimum 300 dpi recommended).

Recommended Length: Standard paper: **up to 6 pages**. Invited lecture: **up to 10 pages**

These limits are recommended because the proceedings will be published electronically.

TITLE IN THE ORIGINAL LANGUAGE

TITLE IN ENGLISH

Author (s) Helena Hniličková

Affiliation: Department, Institution, Postal address, Country, e-mail

Summary

Hop plants are very demanding as concerns sufficient amount of water, and therefore the aim of the experiments was to monitor the impact of water deficit on the exchange of gases in the juvenile hop plants. **Maximum length: 10 lines.**

Key words: hop plants, Humulus lupulus L., water stress, photosynthesis rate, transpiration rate

Souhrn – in the original language

Ve skleníkových pokusech byla gazometricky měřena rychlost fotosyntézy, transpirace u juvenilních rostlin chmele – Žateckého poloraného červeňáku 'Osvaldův klon 72'. Rostliny chmele, ve vývojových fázích 12.BBCH až 25.BBCH, byly pěstovány v nádobách se směsí zahradnického substrátu A a křemičitého písku v poměru 2:1, přičemž schéma pokusu zahrnovalo dvě varianty: kontrolní (zavlažovanou do plného nasycení) a stresovanou, kdy byla zálivka omezena na 35 % polní vodní kapacity. **Maximum length: 10 lines.**

Klíčová slova: chmel, Humulus lupulus, fotosyntéza, transpirace, vodní stres

INTRODUCTION

Nejvýznamnější pěstitelskou oblastí je Žatecko, kde se chmel pěstuje na výměře cca 4 006 ha. Převážná část uvedené oblasti se nachází v dešťovém stínu Krušných hor, který je možné v souladu s prací /5/ zařadit do 61 % zemského povrchu, který má méně než 500 mm srážek. Z uvedeného tedy

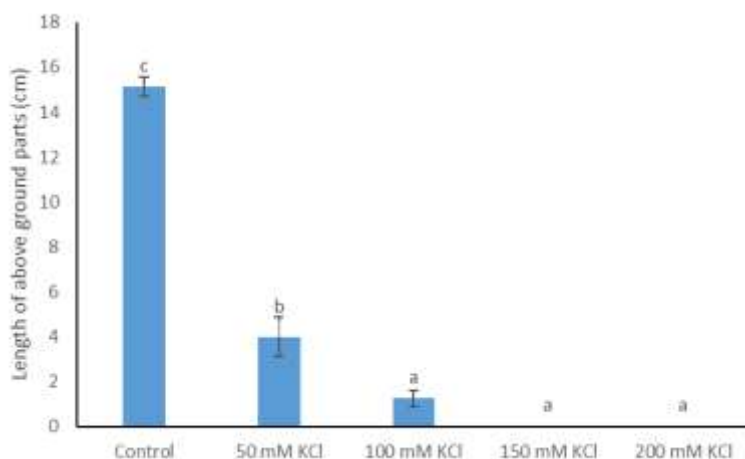
vyplývá, že nejčastějším limitujícím faktorem pěstování polních plodin je nerovnoměrné rozdělení srážek během jejich vegetace a následný vodní deficit (sucho), jak dokládají také práce /16/ a dalších.

MATERIALS AND METHODS

Pokus byl koncipován jako nádobový, kdy pokusné rostliny byly pěstovány v nádobách o objemu 15 l ve směsi zahradního substrátu A a říčního křemičitého písku v poměru 2:1 ve fyziologickém skleníku. Zahradnický substrát A má upravenou reakci a je obohacený živinami. Pokusným materiálem byl chmel otáčivý (*Humulus lupulus* L.) - Žatecký poloraný červeňák – Osvaldův klon 72.

RESULTS AND DISCUSSION

Naměřené hodnoty sledovaných fyziologických parametrů stresovaných rostlin chmele jsou uvedeny v grafech 1 a 2. Z nich vyplývá, že po přerušení závlivky a navození postupné dehydratace omezením závlivky nastal pokles všech sledovaných fyziologických charakteristik. Již druhý den po omezení závlivky (dehydratace) bylo zaznamenáno statisticky průkazné snížení rychlosti transpirace, jak dokumentuje graf 1. Uvedené výsledky jsou v souladu s pracemi např. /1, 11, 14, 20/.



Graf 1: Naměřené hodnoty rychlosti fotosyntézy – P_N – ($\mu\text{mol CO}_2 \cdot \text{m}^{-2} \cdot \text{s}^{-1}$) juvenilních rostlin chmele v závislosti na variantě pokusu. Legenda: d = dehydratace; r = rehydratace.

Tab. 1: Vplyv kadmia a arzenu na vybrané fyziologické parametre výhonkov sóje fazuľovej

Time/ Treatment	Conductivity [μS]				
	Control	50 mM KCl	100 mM KCl	150 mM KCl	200 mM KCl
0 day	1544.1	8832.85	15110.45	19896.55	22205
3rd day	1422.3	8355.45	14082.5	18894.5	21501.65
7th day	1409.25	8383.15	14354.55	20127	23440.25

CONCLUSION

Analýza prokázala, že omezením závlivky dochází ke snížení transpirace.....

REFERENCES

- /1/ Ahmadi, A., Siosemardeh, A.: Investigation on the physiological basis of grain yield and drought resistance in wheat: leaf photosynthetic rate, stomatal conductance, and non-stomatal limitations. *International Journal of Agriculture and Biology*, 7, 2005: 807–811
- /2/ Bodi, Z., Pepo, P.: Trends of pollen production and tassel area index in yellow lines – hybrids and blue corn landraces. *Cereal Research Communication*, 35, 2007: 277–280.

Acknowledgments

Uvedená práce vznikla za finanční podpory výzkumného záměru MSM 6046070901.