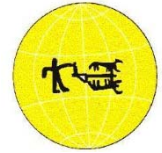




3rd International Scientific Conference

Sustainability challenges in agroecosystems



19th-21st June, 2017, Osijek, Croatia

CONFERENCE PROGRAM

Conference topics/section:

1. Sustainable land management
2. Coping with climate changes in plant production
3. Good agriculture practice and food safety
4. Precision agriculture, mechanization and renewable bioenergy
5. Facilitation of integrated crop protection

1st DAY (Monday, 19 June)

08⁰⁰ – 10⁰⁰ Registration of participants (Faculty of Agriculture, Vladimira Preloga 1 / 2nd floor)

10⁰⁰ – 11⁰⁰ Official Opening of the Conference

11⁰⁰ – 11³⁰ Coffee break

PLENARY SESSION

Chairmen: Danijel Jug, Márta Birkás, Jean Roger-Estrade, Rainer Horn

11³⁰ – 11⁵⁰ **Advances in soil research tasks and requirements for a better understanding of a sustainable environment**
Horn R.^[GER]

11⁵⁰ – 12¹⁰ **Soil deformation: effects on plant root growth and functions**
Lipiec J.^[POL]

12¹⁰ – 12³⁰ **Soil tillage responses to the climate threats – Revaluation of the classic theories**
Birkás M.^[HUN], Jug Danijel^[CRO], Kende Zoltan^[HUN], Kisić Ivica^[CRO], Szemók András^[HUN]

12³⁰ – 12⁵⁰ **Tillage system between intensive farming and sustainable intensification of agriculture**
Bašić F.^[CRO]

12⁵⁰ – 13¹⁰ **Lessons from a long-term tillage experiment at the James Hutton Institute, Dundee, U.K.**
McKenzie B.M., Brown J.L., George, T.S., Ball, B.C., Newton, A.C., Cloy, J.M., Valentine, T.A., Hallett, P.D.^[GBR]

13¹⁰ – 13³⁰ **Questions and Discussion**

13³⁰ – 15⁰⁰ **Welcome cocktail**

PLENARY SESSION – continuation

Chairmen: Blair McKenzie, Vladimír Smutný, Ferdo Bašić, Jerzy Lipiec

15⁰⁰ – 15²⁰ **No-till in Europe: A review of problems and opportunities for sustainable agriculture**
Roger-Estrade J.^[FRA]

15²⁰ – 15⁴⁰ **The use of visual soil evaluation methods in soil structure assessment**
Pulido-Moncada M.A., Munkholm, L. J.^[DEN]

15⁴⁰ – 16⁰⁰ **Current arable farming systems in the Czech Republic – agronomic measures adapting to soil protection and climate change**
Smutný V., Neudert, L., Dryšlová, T., Lukas, V., Handlířová, M., Vrtílek, P.^[CZE]

16 ⁰⁰ – 16 ²⁰	Modern approach to soil tillage in Serbia: from productivity and energy efficiency towards agroecosystems resilience and sustainability <i>Kovačević, D., Momirović, N., Dolijanović, Ž., Poštić, D.^[SRB]</i>
16 ²⁰ – 16 ⁴⁰	Conservation soil tillage effectiveness in severe weather conditions <i>Jug D.^[CRO], Jug, I.^[CRO], Birkás, M.^[HUN], Vukadinović, V.^[CRO], Brozović, B.^[CRO], Stipešević, B.^[CRO], Komljenović, I.^[RS, BIH], Đurđević B.^[CRO]</i>
16 ⁴⁰ – 17 ⁰⁰	Questions and Discussion
17 ⁰⁰ – 17 ¹⁵	Refreshment
17 ¹⁵ – 18 ³⁰	Round table: Conservation agriculture – Global respond / response to climate change!? <i>Moderators: prof. dr. sc. Danijel Jug and prof. dr. sc. Jean Roger-Estrade</i>

20⁰⁰ Welcome dinner

2nd DAY (Tuesday, 20 June)

SESSION I [Sustainable land management]

Chairmen: Irena Jug, Željko Dolijanović, Francisco Márquez-García

09 ³⁰ – 09 ⁴⁰	Yield improvement by using biostimulant products in winter wheat managed with No Till <i>Marquez-García, F., Gil-Ribes, J.A., González-Sánchez, E.J., Blanco, G.L.^[ESP]</i>
09 ⁴⁰ – 09 ⁵⁰	Soil Functional Ability for groundwater recharge related with Land Use and Tillage System in a dry Mediterranean climate, southern Portugal <i>Sampaio, E., Corte-Real, J.^[PRT]</i>
09 ⁵⁰ – 10 ⁰⁰	Characterisation of Luvisol compaction under two different tillage systems and field traffic zones by assessing soil mechanical properties <i>Taguem, E. M., Destain, M.-F., Roisin, C., Dalcq, A.-C., Mercatoris, B.C.N.^[BEL]</i>
10 ⁰⁰ – 10 ¹⁰	Management effect in vineyards on compaction, water conservation and CO2 emission in trafficking zones <i>Bogunović, I., Bilandžija, D., Andabaka, Z., Stupić, D., Kisić, I., Maletić, E., Đurđević, B.^[CRO]</i>
10 ¹⁰ – 10 ²⁰	The Application of the drip irrigation in the production of tobacco and sugar beet in the Republic of Croatia <i>Turšić, I., Danon, V., Šimunić, I., Ivančević, G., Zdeličan, J.^[CRO]</i>
10 ²⁰ – 10 ³⁰	Carbon dynamic after conversion of permanent grassland into arable soil <i>Pospíšilová, L.^[CZE], Vlček, V.^[CZE], Jandák, J.^[CZE], Menšík, L.^[CZE], Barančíková, G.^[SVK]</i>
10 ³⁰ – 10 ⁴⁰	Effects of biochar and sugar factory lime application on soil pH in acidic soils <i>Đurđević, B., Jug, I., Vukadinović, V., Brozović, B., Stipešević, B., Bogunović, I., Jug, D.^[CRO]</i>
10 ⁴⁰ – 10 ⁵⁰	Tillage, farmyard manure, gypsum and sulphur effect on soil physical properties and yield of oats (Avena sativa L) in organic farm in Mediterranean Croatia <i>Bogunović, I., Vukadinović, V., Kisić, I.^[CRO]</i>
10 ⁵⁰ – 11 ¹⁰	Questions and Discussion
11 ¹⁰ – 11 ³⁰	Coffee break

SESSION II [Coping with climate changes in plant production]

Chairmen: Margarita Nankova, Bojan Stipešević, Srđan Šeremešić

11 ³⁰ – 11 ⁴⁰	Yield and Yield Components of Maize (Zea Mays L.) Hybrids as Affected by Irrigation Scheduling and Meteorological Conditions <i>Marković, M., Šoštarić, J., Josipović, M., Brkić, A.^[CRO]</i>
11 ⁴⁰ – 11 ⁵⁰	Carbon footprint of rainfed and irrigated arable crops under tillage compared to no till & guide assistance <i>Marquez-García, F., Gil-Ribes, J.A., Blanco, G.L., González-Sánchez, E.J.^[ESP]</i>
11 ⁵⁰ – 12 ⁰⁰	Agrometeorological forecast of soil temperatures <i>Kuraži, D., Vučetić, V.^[CRO]</i>

12 ¹⁰ – 12 ²⁰	Projections of temperature-based agroclimatic indices in southern Romania <i>Piticar, A.^[ROM], Croitoru A.-E.^[ROM], Djurdjević, V.^[SRB]</i>
12 ²⁰ – 12 ³⁰	Future projection of warm spells and cold spells in transition seasons in low-lands of Western Romania <i>Ciupertea, A.F.^[ROM], Piticar, A.^[ROM], Djurdjevic, V.^[SRB], Croitoru, A.-E.^[ROM], Scripcă, A.S.^[ROM]</i>
12 ³⁰ – 12 ⁴⁰	The assessment of carbon footprint of major field crops in Vojvodina Province of Serbia <i>Šeremešić, S.^[SRB], Ćirić, V.^[SRB], Vasin, J.^[SRB], Đurđević, B.^[CRO], Đalović, I.^[SRB], Milošev, D.^[SRB], Ninkov, J.^[SRB]</i>
12 ⁴⁰ – 13 ⁰⁰	Questions and Discussion
13 ⁰⁰ – 14 ⁰⁰	Lunch

SESSION III

[Good agriculture practice and food safety]

Chairmen: Adina-Eliza Croitoru, Boris Đurđević, Lubica Pospisilova

14 ⁰⁰ – 14 ¹⁰	Impact of soil tillage and fertilization on soil properties <i>Turan, J.^[SRB], Zoltan, K.^[SRB], Sedlar, A.^[SRB], Jug, D.^[CRO], Ponjičan, O.^[SRB], Bugarin, R.^[SRB], Višacki, V.^[SRB]</i>
14 ¹⁰ – 14 ²⁰	The Presence of Cadmium in Cattle Meat and Offal on the Area of Central Bosnia Canton with the Risk Assessment on Human Health <i>Čolić, A.^[BIH], Mačkić, S.^[BIH], Ahmetović, N.^[BIH], Antunović, B.^[CRO], Šukalić, A.^[BIH], Brkić, E.^[BIH], Hero, M.^[BIH], Hodžić, A.^[BIH], Karić, E.^[BIH]</i>
14 ²⁰ – 14 ³⁰	Human health risk assessment of heavy metals from the agricultural soil in South Herzegovina <i>Šukalić, A.^[BIH], Ahmetović, N.^[BIH], Mačkić, S.^[BIH], Leto, A.^[BIH], Džubur, A.^[BIH], Antunović, B.^[CRO]</i>
14 ³⁰ – 14 ⁴⁰	Strategies of growing several sorghum cultivars as a post-harvest crop in North-Eastern Croatia condition <i>Stipešević, B., Brozović, B., Jug, D., Jug, I., Đurđević, B., Vukadinović, V.^[CRO]</i>
14 ⁴⁰ – 14 ⁵⁰	Maize response to conservation tillage and nitrogen management <i>Jug, I., Jug, D., Kotorac, F., Vukadinović, V., Brozović, B., Stipešević, B., Tucak, M., Bertić, L., Đurđević B.^[CRO]</i>
14 ⁵⁰ – 15 ⁰⁰	Questions and Discussion
15 ⁰⁰ – 15 ²⁰	Coffee break

SESSION IV

[Precision agriculture, mechanization and renewable bioenergy]

Chairmen: Ivica Kisić, Elsa Sampaio, Aleksandar Sedlar

15 ²⁰ – 15 ³⁰	Role of post-harvest residue treatment on the spring crops productivity in haplic chernozems <i>Iliev, I., Nankova, M., Milev, G.^[BUL]</i>
15 ³⁰ – 15 ⁴⁰	Effect of the main soil tillage types on the agronomic response of wheat in the region of south dobрудzha <i>Nankova, M., Bankova-Atanasova, G.^[BUL]</i>
15 ⁴⁰ – 15 ⁵⁰	Low grain yield of soybean and its temporal variability are improved by deep ripping tillage <i>Etchegoimberry, P., Izaguirre, R., Ernst, O.^[URG]</i>
15 ⁵⁰ – 16 ⁰⁰	Adapting the spraying machinery to increase the environmental safety in PPP applications in traditional and intensive olive orchards <i>Miranda-Fuentes, A., Rodríguez-Lizana, A., Cuenca, A., González-Sánchez, E.J., Márquez-García, F., Blanco-Roldán, G.L., Gil-Ribes, J.A.^[ESP]</i>
16 ⁰⁰ – 16 ¹⁰	Soil processing technology and nozzles type as factor of pesticide residues in the soil <i>Sedlar, A.^[SRB], Zoltan, K.^[SRB], Turan, J.^[SRB], Jug, D.^[CRO], Ponjičan, O.^[SRB], Bugarin, R.^[SRB], Višacki, V.^[SRB]</i>
16 ¹⁰ – 16 ²⁰	Foliar fertilizers deposition quality with different nozzle types in wheat <i>Višacki, V., Sedlar, A., Turan, J., Ponjičan, O., Bugarin, R., Ivanišević, M., Kalajdžić, M.^[SRB]</i>
16 ²⁰ – 16 ³⁰	Estimation of soil properties on the base of multispectral remote sensing data and derived indexes <i>Novák, J., Lukas, V., Křen, J.^[CZE]</i>
16 ³⁰ – 16 ⁵⁰	Questions and Discussion
16 ⁵⁰ – 17 ¹⁰	Coffee break

POSTER SESSION

[17¹⁰ – 18⁰⁰]

Chairmen: Bojana Brozović, Diana Kuraži, Pilar Etchegoimberry

- 1 **Characterization of household differentiation from the perspective of farmland transfer in eastern China using an agent based model**
Xiao Chang, Liming Liu^[CHN]
- 2 **The impact of tillage and fertilization on wheat grain infection with *Fusarium* spp.**
Vrandečić, K., Jug, D., Ćosić, J., Ilić, J., Kesić, I., Jug, I.^[CRO]
- 3 **Effects of winter cover crops incorporation on weed infestation in organic popcorn maize production**
Brozović, B., Stipešević, B., Jug, D., Jug I., Vukadinović, V., Đurđević, B.^[CRO]
- 4 **The changes of soil structure and water stability of soil aggregates under different compost doses**
Novotná, J., Badalíková B.^[CZE]
- 5 **PEG-induced drought in wheat genotypes at the germination stage**
Ižaković, M., Španić, V., Marček, T.^[CRO]
- 6 **Green beans (*Phaseolus vulgaris* L.) root nodules number after treatment with nettle leaf extract**
Perincic, B., Brkljača, M., Ban, D., Romić, M., Goreta Ban, S.^[CRO]
- 7 **Forage legumes breeding strategies for adaptation on the future environment challenges**
Tucak, M., Popović, S., Čupiće, T., Krizmanić, G., Horvat, D., Jug, I., Jug, D.^[CRO]
- 8 **Effect of different tillage intensity on physical and hydrophysical properties of soil**
Houšť, M., Procházková, B., Neudert, L., Lukas, V.^[CZE]
- 9 **Effect of different soil tillage on yield and chosen grain qualitative parameters of malting spring barley**
Pernicová, A., Procházková, B., Procházka, J., Houšť, M.^[CZE]
- 10 **Product of NDMI, NDVI and LST to detect the impact of climate variability on agricultural land**
Roșca, F.C., Harpa, G.V.^[ROM]
- 11 **Produced levels mechanic vibration in operator cabin of agricultural tractor by various agrotechnical surfaces**
Barač, Ž., Plaščak, I., Jurišić, M., Heffer, G., Vidaković, I., Zimmer, D.^[CRO]
- 12 **The influence of agronomical factors on the yield of winter wheat in the crop rotation with livestock production**
Vrtílek, P., Smutný, V., Neudert, V., Dryšlová, T.^[CZE]
- 13 **Distribution of manure and slurry - case study**
Zimmer, D., Šumanovac, L., Jurišić, M., Plaščak, I., Vidaković, I., Barač, Ž.^[CRO]
- 14 **Future changes in Consecutive Dry Days index in Central Romania**
Harpa, G.V., Rosca, F.C., Horvath C.^[ROM]
- 15 **Mapping of soil spatial variability by on-the-go measurement of soil electrical conductivity**
Lukas, V., Neudert, L., Novak, J.^[CZE]
- 16 **Innovated retro: Cover cropping and horse traction to combat soil compaction and improve soil fertility**
Gantner, R.^[CRO], Zimmer, D.^[CRO], del Vechio, I.^[CRO], Schlechter, P.^[LUX]
- 17 **The impact of various soil tillage methods on soil physical properties in grain maize stands**
Neudert, L., Smutny, V.^[CZE]
- 18 **Grain yield of spring barley grown in long-term stationary experiment**
Dryšlova, T., Kren, J., Smutny, V., Prochazkova, B.^[CZE]
- 19 **The effect of water deficit on yield and yield component variation in winter wheat**
Smutná, P.1, Elzner, P.^[CZE]
- 20 **Assessment of the main agro-ecological parameters effects on the cultivation of *Miscanthus x giganteus* grown on marginal soils in the Republic of Serbia**
Maksimović, J., Željko Dželetović, Ž., Dinić, Z., Stanojković-Sebić, A., Cvetković, O., Pivić, R.^[SRB]
- 21 **Monitoring of agricultural land as a basic tool for sustainable land management in Croatia**
Jug, I., Cvitković, I., Bubalo, A., Galić, A., Vukadinović, V., Đurđević B., Jug, D.^[CRO]
- 22 **The role of soil suitability assessment system for sustainable food production**
Vukadinović, V., Jug, I., Đurđević, B., Jug, D., Stipešević, B., Brozović, B., Miklavčić, D., Tkalčec, G., Vukadinović, V.^[CRO]

18⁰⁰ – 18⁴⁵ Panel discussion and Conference conclusions

Moderators: Danijel Jug, Márta Birkás, Vladimír Smutný

20⁰⁰ Gala dinner and closing ceremony

08³⁰ – 18⁰⁰ Field trip / excursion

- Family farm "PG Knežević" – Traditional Croatian breakfast



- Estate: cca 300 ha agricultural land
- Crops: soybean, wheat, maize and silage maize
- Service / rent for cca 1500 ha
- Service for Biogas plants
- Employees: 3 family member and 2 workers

- Nature Park Papuk: Locality "Jankovac"



Proclamation of the Nature Park Papuk, on April the 23rd 1999, because of its extraordinary geological and biological variety and valuable cultural and historical inheritance.

Inside the Park are numerous areas with a higher protection level than other parts of the Park. These areas have been given the status of specially protected areas because of their unusual features, manifesting them as unique on the area, region, State or even beyond. Specially protected areas are: the geological nature monument Rupnica, the Forest Park Jankovac, the special reserve of forest vegetation Sekulinačke planine (Sekulinačke Mountains), the nature monument Dva hrasta (Two Oaks), the nature monument Stanište tise (Yew Habitat), and the special floristic reserve Pliš-Mališćak-Turjak-Lapjak.

- Nature Park Papuk: Locality Rupnica (Basalt columns)

As basaltic lava cools over an extended period of time, beautiful geometric forms emerge; incredible columns of hexagonal basalt rock.

The area of the Nature Park represents geological the most various area on this part of the Republic Croatia. Following the European and World initiatives about the protection of valuable geological inheritance, associations like the European Geoparks Network (EGN) and the Global Geoparks Network (GGN) were founded. The Nature Park Papuk became member of these mentioned associations in 2007, as first geological Park from Croatia.

