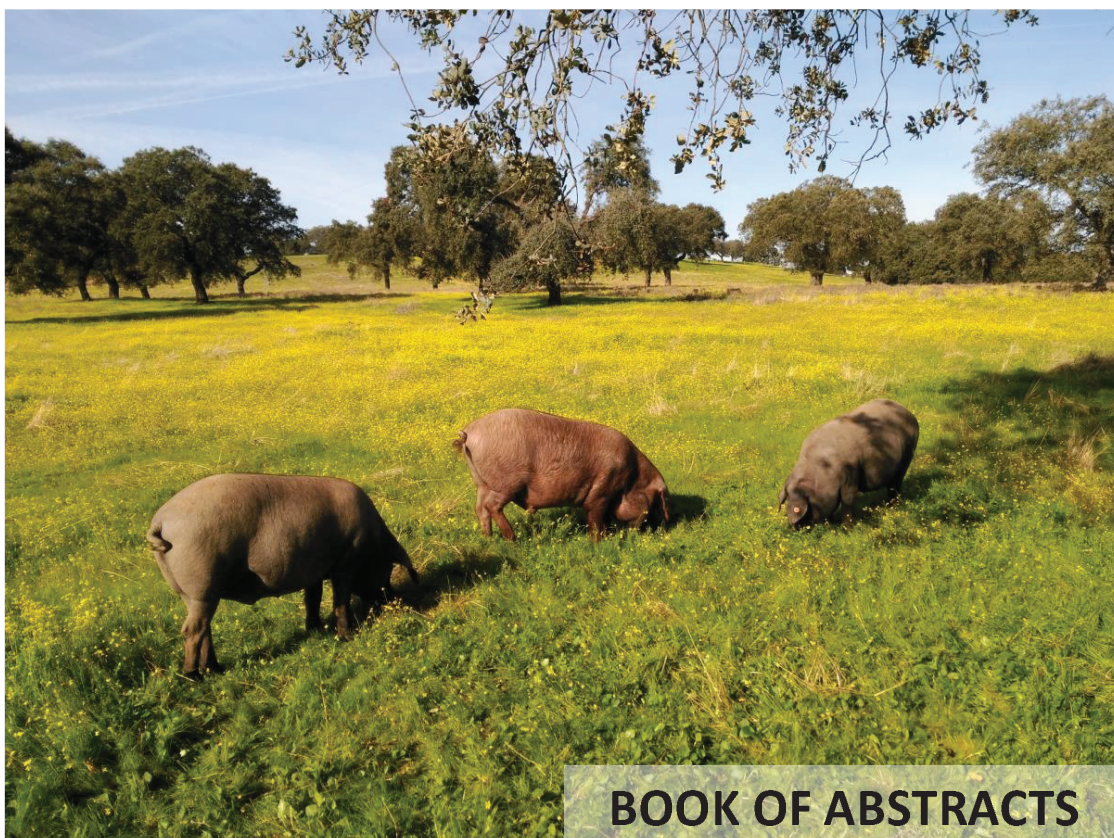


 **4th FATTY PIG**
Science & Utilization
International Conference
NOVEMBER 2017, Badajoz (SPAIN)



Organizing institutions:

JUNTA DE EXTREMADURA

Consejería de Economía e Infraestructuras



CENTRO DE INVESTIGACIONES
CIENTÍFICAS Y TECNOLÓGICAS
DE EXTREMADURA



MINISTERIO
DE ECONOMÍA, INDUSTRIA
Y COMPETITIVIDAD



**4th Fatty Pig Science & Utilization
International Conference**

23-25 November, 2017, Badajoz (Spain)

BOOK OF ABSTRACTS

Edited by CICYTEX (Scientific and Technological
Research Center of Extremadura, Spain):

Mercedes Izquierdo Cebrián
Susana García Torres
María Cabeza de Vaca
Rosario Ramírez Bernabé
Francisco Ignacio Hernández García
David Tejerina Barrado
Javier Matías Prieto
Ana Isabel del Rosario González
Montaña López Parra
Agustín Jaramillo Romero

ISBN: 978-84-697-7375-8

Book of Abstracts of the 4th Fatty Pig Science & Utilization International Conference, 23-25 November, 2017, Badajoz (Spain).

Edited by CICYTEX: M. Izquierdo Cebrián, S. García Torres, M. Cabeza de Vaca, R. Ramírez Bernabé, F. I. Hernández García, D. Tejerina Barrado, J. Matías Prieto, A. I. del Rosario González, M. López Parra, A. Jaramillo Romero.

ISBN: 978-84-697-7375-8

©2017, CICYTEX (Centro de Investigaciones Científicas y Tecnológicas de Extremadura). Autovía A-5, Km 372; 06187-Guadajira, Badajoz (Spain).

Cover photographs. Description and credits:

- Front cover: Iberian pigs during *montanera* in the *dehesa*. From left to right, Retinto, Torbiscal and Lampiño strains. Javier García Gudiño (CICYTEX; IRTA).
- Back cover: Blond Mangalitzta piglet and sow. Francisco I. Hernández García (CICYTEX).

Printed by Borame, Badajoz (Spain)

FATTY ACIDS CONTENT OF *M. LONGISSIMUS DORSI* OF MORAVKA PIGS (S4P15)

R. Savić, M. Petrović, Č.r Radović, N. Parunović, D. Radojković, N. Stanišić, M. Gogić, M.Č. Potokar

University of Belgrade-Faculty of Agriculture, 11080 Belgrade-Zemun, Republic of Serbia
Institute for Animal Husbandry, 11080 Belgrade- Zemun, Republic of Serbia
Institute of Meat Hygiene and Technology, 11000 Belgrade, Republic of Serbia
Agricultural Institute of Slovenia, 1000 Ljubljana, Slovenia
Corresponding author: savic@agrif.bg.ac.rs

Fatty acids composition of *m. longissimus dorsi* (MLD) of Moravka pigs was analyzed considering also the effect of sex and body weight of pigs at slaughter. Pigs were reared in facilities with the open-air section and fed a complete feed mixtures adapted to the stage of growth (from 20-60 kg mixture I: 15.50% of crude protein (CP) and 12.95 MJ metabolisable energy (ME)/kg,; from 60-120 kg mixture II: 13.00% CP and 13.05 MJ ME/kg). The study included 21 pigs (12 castrated males and 9 females). Pigs were slaughtered at 339±30 days of age and 112.8±19.9 kg of live weight. MLD of Moravka pigs had the following fatty acids composition: 41.8 % saturated fatty acids (ΣSFA), 54.0% monounsaturated fatty acids (ΣMUFA) and 4.1% polyunsaturated fatty acids (ΣPUFA) resulting in value 0.10 for the ratio of polyunsaturated to saturated fatty acids (P/S). Fatty acids C16:0 and C18:0 represented the largest share of ΣSFA (61.7 and 34.3 %, respectively), C18:1 and C16:1 the largest share of ΣMUFA (90.1 and 7.1%, respectively), and C18:2 the largest share of ΣPUFA (93.5%). With regard to sex effect, castrated males exhibited higher content of saturated fatty acids C14:0 (1.42 vs. 1.26, P=0.046) and C18:0 (15.07 vs. 13.38, P=0.025) than females. Significant effect (P<0.05) of body weight was observed on some fatty acids; thus 1 kg increase of slaughter weight was accompanied with 0.036% decrease of linoleic acid (C18:2n-6), 0.038% decrease of total content of polyunsaturated acids (ΣPUFA), 0.020% increase of palmitoleic acid (C16:1cis-9), 0.067% increase in total content of monounsaturated fatty acids (ΣMUFA), 0.003% increase of C17:0. Ratio P/S decreased by 0.001 unit per kg increase of slaughter weight. In agreement with their high relative content, a strong correlation ($r_P=0.79$ and $r_P=0.77$) was found between C16:0 and C18:0 and total content of saturated fatty acids (ΣSFA), between C16:1cis-9 and C18:1cis-9 and

Σ MUFA ($r_P=0.80$ and $r_P=0.98$, $p<0.001$), and between linoleic acid (C18:2n-6) and Σ PUFA ($r_P=0.99$, $p<0.001$).

Keywords: indigenous pig breed, sex, muscle tissue, fatty acids

Acknowledgments: This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 634476 (Project acronym: TREASURE). The content of this paper reflects only the author's view and the European Union Agency is not responsible for any use that may be made of the information it contains. Research was partly financed by the Ministry of Education, Science and Technological Development of Republic of Serbia, project TR 31081.