DRUŠTVO GENETIČARA SRBIJE
SERBIAN GENETICS SOCIETY

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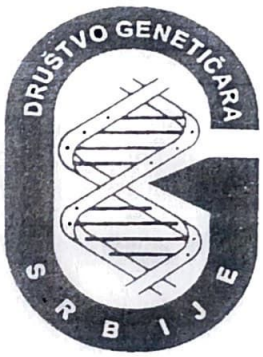

PROGRAM – IZVODI - SPISAK UČESNIKA

PROGRAM – ABSTRACTS - LIST OF PARTICIPANTS

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Cytogenetic analysis described above point to the increase of nonvital piglets in the offspring dependent of ordinal number of partuition. Also, we observed that piglet malphormations are correlated with structural aberrations found both in the offspring, as well as in piglets itself. Thus, after the analysis of piglet cariotypes with such malformations we established direct relationship between the anomaly and certain chromosomal changes:

ANOMALY	MARKER CHROMOSOME
Cheliognathopalathoschisis	deletion 13q-
Atresia ani	reciprocal translocation t; (1q-;15q+)
Extremitas ad latus	Robertsonian translocation Rb; (14/15)(14+)
Flexia phalangis distalis extremitas	reciprocal translocation t; (4q+;14q-)

On the basis of the obtained results we concluded that the age of female pifgs inluences the occurrence of chromosome aberrations both in females and in their offspring, as a result nonvitality of piglets was observed as well as increased number of piglets with congenital malphormations.

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GENETSKE ANALIZE RODITELJA U SELEKCIJI PŠENICE PREMA OBLIGATNIM PARAZITIMA

Zoran Jerković., Radivoje Jevtić
Naučni institut za ratarstvo i povrtarstvo, Maksima Gorkog 30, 21000 Novi Sad, Jugoslavija

Osnovni preduslov za uspešnu selekciju na otpornost prema obligatnim parazitima je raličitost roditelja po genima koji tu osobinu kontrolišu. Broj gena i njihove interakcije, bez obzira na vrstu otpornosti, od presudnog su značaja za trajnost ispoljavanja osobine.

S ciljem stvaranja linija različitih po osnovi otpornosti prema Puccinia recondita tritici i Erysiphe graminis tritici odabrane su dve linije kompletno otporne prema prouzrokovaču lisne rdje i pepelnice u stadijumu sejanaca (kontrolisani uslovi) i polju. Kao drugi roditelj u kombinacijama poslužila je sorta s odredjenim stepenom nekompletne otpornosti prema oba parazita, Valjevka. Kompletno otporni roditelji prema prouzrokovaču lisne rdje se razlikuju po tri komplementarna nezavisno nasledjivana dominantna gena od Valjevke, KM 175/89 (otporne kombinacije A_B__, A_C_, B_C_) a KM 54/89 (A_B_C_). Prema prouzrokovaču pepelnice prvi kompletno otporni genotip sadrži dva nezavisna gena za otpornost sa pojedinačnim a drugi tri s komplementarnim delovanjem (A_B_, A_C_). U potomstvima je došlo do transgresivnog razdvajanja u smeru nekompletne otpornosti prema parazitima. Otpornost ispoljena razlikama u reakcionim tipovima nije zadržana u kasnijim generacijama (F4 i F5). Povećanje nekompletne otpornosti prema oba parazita objašnjavamo interakcijama gena iz oba roditelja. Stvoreno je deset različito otpornih linija.

GENETIC ANALYSIS OF PARENTS IN WHEAT BREEDING TO OBLIGATE PARASITES RESISTANCE

Zoran Jerković., Radivoje Jevtić
Institute of Field and Vegetable Crops, Maksima Gorkog 30, 21000 Novi Sad, Yugoslavia

Base for the successful breeding for the resistance to obligate parasites of wheat is difference between parents according to genes controling the characters. Number of genes and their interactions related to any type of the resistance are most important for the durability of the mentioned characters.

In order to create new lines with different base of Puccinia recondita and Erysiphe graminis resistance, two completely resistant lines in the seedling stage (controled conditions) and in the field conditions were chosen. The second parent was Valjevka, variety with determinated level of uncomplete resistance to both parasites. Completely resistant parents to leaf rust couser are different from Valjevka in three independantly inherited, complementar, dominant genes, KM 175/89 (resistant combinations A_B__, A_C_, B_C_) and KM 54/89 (A_B_C_). To powdery mildew couser, first completely resistant parent contains two independently inherited genes and the second one three with complement effect (A_B_, A_C_). In the progenies was transgressive segregation in direction of increasing of uncomplete resistance to parasites. Resistance expressed by differences in reaction types was not characteristic of older generations (F4 and F5). Enhacement of the uncomplete resistance can be explained by new interactions. Ten different lines according to resistance was created.