Action FA0803

COLOSS Work Shop
WG4

"Honey bee vitality and diversity Survival test: final results and paper preparing"
12 - 13. 04. 2012

Research Institute of Horticulture
Apiculture Division in Puławy
Kazimierska 2, 24-100 Puławy, Poland

Action FA0803

List of Participants

Sreten Andonov	sreten_andonov@yahoo.com
Małgorzata Bieńkowska	malgorzata.bienkowska@man.pulawy.pl
Ralph Büchler	ralph.buechler@llh.hessen.de
Cecilia Costa	cecilia.costa@entecra.it
Yves Le Conte	leconte@avignon.inra.fr
Maja Drazic	mdrazic@hpa.hr
Dariusz Gerula	dariusz.gerula@man.pulawy.pl
Fani Hatjina	fhatjina@instmelissocomias.gr
Nikola Kezic	nkezic@agr.hr
Beata Panasiuk	beata.panasiuk@man.pulawy.pl
Lauri Ruottinen	lauri.ruottinen@mtt.fi
Paweł Węgrzynowicz	pawel.wegrzynowicz@man.pulawy.pl
Jerzy Wilde	jerzy.wilde@uwm.edu.pl

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Tel.: +48 81 886 42 08
Fax: +48 81 886 42 09

Agenda

TIME	PROVISIONAL PROGRAM
11.04.2012 (Wednesday)- arrival to Puławy	
12.04.2012 (Thursday) Marynka Palace in Puławy	
09:30 - 10:00	WG4 registration
10:00 – 10:30	Welcome and organizational matters
10:30 – 13:30	Presentations (discussion) of/on WG4 activities done, primary results, paper drafts
13:30 – 14:30	Lunch
14:30 – 18:00	Presentations – discussions – publication preparing
19:00	Welcome dinner
13.04.2012 (Friday) **Seasonal Laboratory of Apiculture Division or Marynka Palace**	
09:30 – 10:30	Results and discussions on the papers preparing
10:30 – 11:00	Coffee break
11:00 – 13:30	Presentations – discussions – publication preparing
13:30 – 14:30	Lunch
14:30 – 18:00	Presentations – discussions – publication preparing
19:00 – open	Social dinner

Local organizers: Beata Panasiuk, Małgorzata Bieńkowska

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Abstracts

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Survivability of European honey bee colonies with regard to genotype and environmental adaption

Ralph Büchler*[1)], Beata Panasiuk[2)], Malgorzata Bienkowska[2)], Seppo Korpela[3),] Sreten Andonov[4)], Aleksandar Uzunov[4)], Cecilia Costa[5)], Fani Hatjina[6)], Plamen Petrov [7)], Yves Le Conte[8)], Nikola Kezic[9)], Maja Drazic[9)], Jerzy Wilde[10)]

1) LLH, Bee Institute, Erlenstrasse 9, 35274 Kirchhain, Germany
2) Research Institute of Horticulture, Apiculture Division, 24-100 Pulawy, Poland
3) MTT, Agrifood research Finland, 31600 Jokioinen, Finland
4) Faculty for Agricultural Science and Food, bul. Aleksandar Makedonski b.b., 1000 Skopje, Republic of Macedonia
5) CRA-API, Bee and Silkworm Research Unit, Via di Saliceto 80, 40128 Bologna, Italy
6) Hellenic Institute of Apiculture Nat. Agr. Org. 'DEMETER', N. Moudania, Greece
7) Agricultural University – Plovdiv, Bulgaria
8) INRA, UMR 406 Abeilles et Environnement, Laboratoire Biologie et Protection de l'abeille, Site Agroparc, Domaine Saint-Paul, 84914 Avignon Cedex 9, France
9) Faculty of Agriculture, University of Zagreb, Svetosimunska 25, 10000 Zagreb, Croatia
10) Apiculture Division, Warmia and Mazury University, Sloneczna 48, 10-710 Olsztyn, Poland

* Author for correspondence: ralph.buechler@llh.hessen.de, Erlenstrasse 9, 35274 Kirchhain, Germany, ++49 6422 940613

A descriptive and statistical analysis of the results from the long term survival experimenton genotype – environment interactions (GEI) will be presented and discussed with regard to a proposed common scientific publication in JAR.

A preliminary evaluation of the 621 colonies in test indicates significant differences of the survival rate and average survival duration between the genotypes and the test locations as well as significant interactions between those factors.

The survival is limited by a number of causes with different relevance during the course of the experiment and for specific environmental conditions. Recommendations can be concluded for the reduction of European colony losses by the use of well adapted bees and for the needs of local breeding activities.

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Classification and description of the environments in which the GEI experiment was performed

Cecilia Costa[1*)], Sreten Andonov[2)], Ralph Büchler[3)], Maja Drazic[4)], Fani Hatjina[5)], Yves Le Conte[6)], Beata Panasiuk[7)], Aleksandar Uzunov[2)]

1) CRA-API, Bee and Silkworm Research Unit, Via di Saliceto 80, 40128 Bologna, Italy
2) Faculty for Agricultural Science and Food, bul. Aleksandar Makedonski b.b., 1000 Skopje, Republic of Macedonia
3) LLH, Bee Institute, Erlenstrasse 9, 35274 Kirchhain, Germany
4) Croatian Agricultural Agency, Ilica 101, 10000 Zagreb, Croatia
5) Hellenic Institute of Apiculture Nat. Agr. Org. 'DEMETER' N. Moudania, Greece
6) INRA, UMR 406 Abeilles et Environnement, Laboratoire Biologie et Protection de l'abeille, Site Agroparc, Domaine Saint-Paul, 84914 Avignon Cedex 9, France
7) Research Institute of Horticulture, Apiculture Division, 24-100 Pulawy, Poland

* Author for correspondence: cecilia.costa@entecra.it, via di Saliceto 80, 40128 Bologna, Italy +39 0522 285532

In order to assess the impact of the environmental factors on the survival of different strains of honey bees and on colony and disease development, the locations in which the genotype-environment interactions experiment was carried out will be objectively described by using meteorological parameters. The first whole year of the experiment, 2010, was chosen as reference year, and for each location the following parameters were obtained from regional or national weather / environment institutions: daily mean, minimum and maximum temperature (°C), daily mean relative humidity (%), daily rainfall (mm). These parameters will be used to classify the environments by relating them to honey bee activity, for example by assessing the number of days of flight activity and the duration of the winter cluster. Information on the vegetation status of the test locations was also collected and will be used as a further descriptive parameter.

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Colony development parameters in relation to genotype and environmental variations

Lauri Ruottinen[1*)], Malgorzata Bienkowska[2)], Ralph Buechler[3)], Leonidas Charistos[4)], Maja Drazic[5)], Dariusz Gerula[2)], Fani Hatjina[4)], Hrisula Kiprijanovska[6)], Yves le Conte[7)], Marco Lodesani[8)], Plamen Petrov[9)], Jerzy Wilde[10)]

1. MTT Agrifood Research Finland, 31600 Jokioinen, Finland
2. Research Institute of Horticulture, Apiculture Division, 24-100 Pulawy, Poland
3. LLH, Bee Institute, Erlenstrasse 9, 35274 Kirchhain, Germany
4. Hellenic Institute of Apiculture , Nat. Agr. Org. 'DEMETER', N. Moudania, Greece
5. Croatian Agricultural Agency, Zagreb, Croatia
6. Faculty for Agricultural Science and Food, bul. Aleksandar Makedonski b.b., 1000 Skopje, Republic of Macedonia
7. INRA, UMR 406 Abeilles et Environnement, Laboratoire Biologie et Protection de l'abeille, Site Agroparc, Domaine Saint-Paul, 84914 Avignon Cedex 9, France
8. CRA-API, Bee and Silkworm Research Unit, Via di Saliceto 80, 40128 Bologna, Italy
9. Agricultural University, Plovdiv, Bulgaria
10. Apiculture Division University of Warmia and Mazury in Olsztyn, Olsztyn, Poland

* Author for correspondence: lauri.ruottinen@mtt.fi

Colony development through the seasons is unavoidable related to environmental conditions as well as to the genetic base of the bees and it is referring to bee population through the seasons, number of brood cells, honey yield per year, feed balance, pollen storage and overwintering index. The last parameter will also take into account food consumption during the winter months.

Preliminary data on colony development related to the GEI experiment, has shown strong influence of the environment on the performance of queens of the different genotypes. Data on "extreme" conditions, eg Greece and Finland might be used as examples. Methods for data analysis and the complete set of results will be presented and discussed focussing in the planned publication.