

BiolMiel:

The International Organic Honey Competition

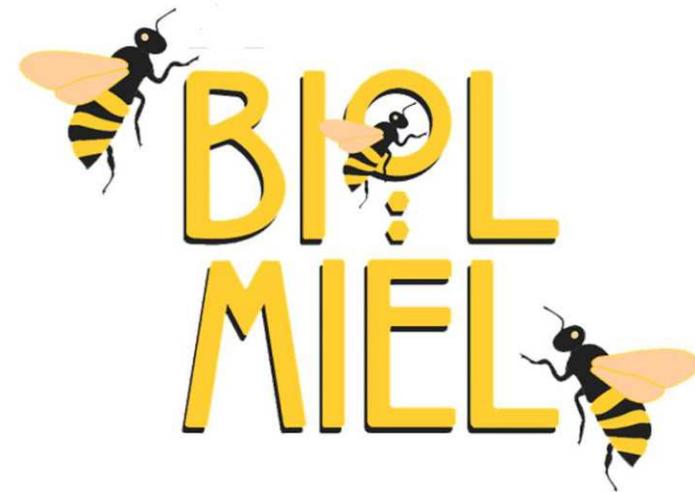
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Agricultural Research Council

Honeybee and Silkworm Research Unit



ORGANIC BEEKEEPING CONFERENCE

Sunny Beach, Bulgaria, 27-29 August 2010

ORGANIC PRODUCTION

Greater professionalism

Less product obtained

Treatment process can be more difficult

Higher costs





HONEY COMPETITION



Consumer is made aware of
organic honey

Monitoring the quality and
purity of honey

Not only natural but also high
quality product

Good evaluation → increase in
price



SENSORY ANALYSIS

- **ANALYTICAL TOOL FOR CONTROL**

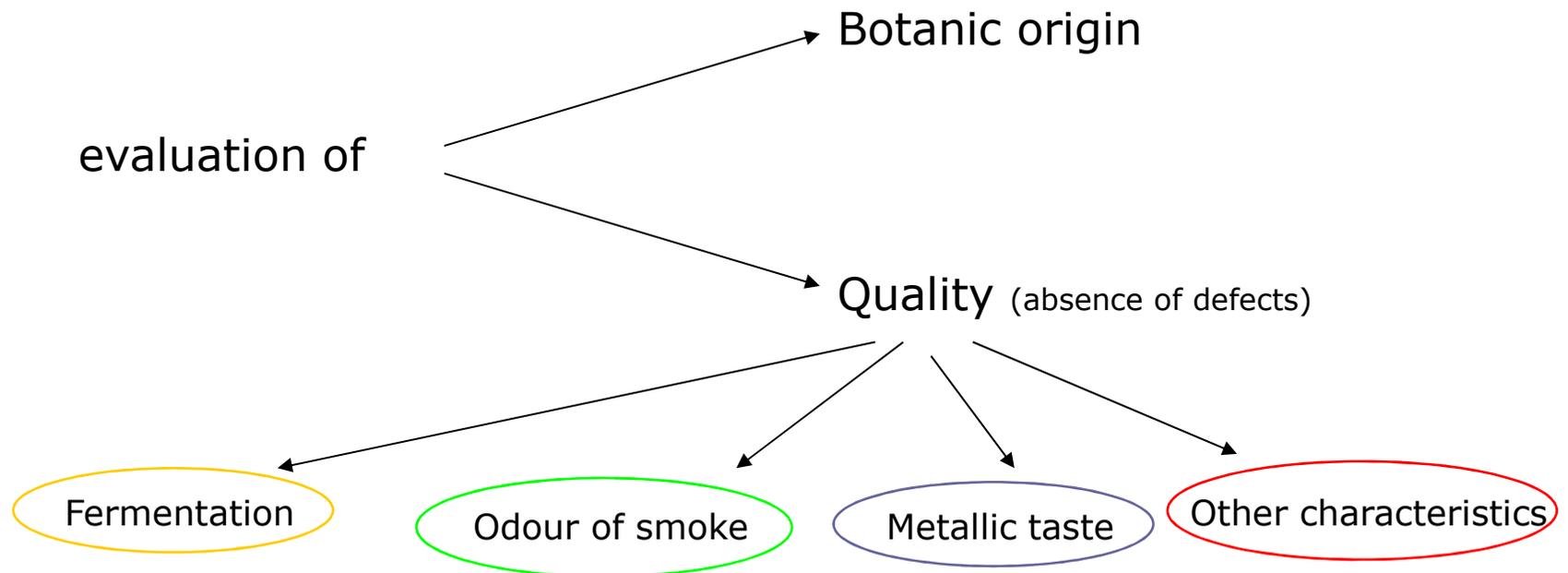
evaluation of

Botanic origin



SENSORY ANALYSIS

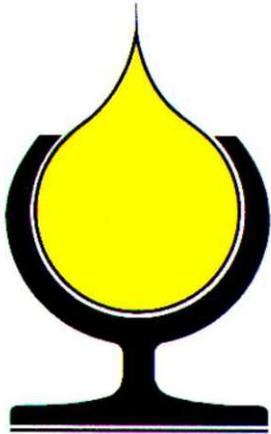
● **ANALYTICAL TOOL FOR QUALITY CONTROL**



SENSORY ANALYSIS

- **ANALYTICAL TOOL FOR QUALITY CONTROL**
- **A WAY TO PROMOTE AND ADD VALUE**





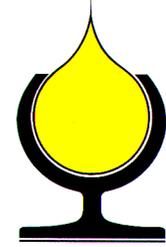
National List of Experts in Sensory Analyses of Honey

ALBO NAZIONALE DEGLI ESPERTI IN ANALISI
SENSORIALE DEL MIELE

History

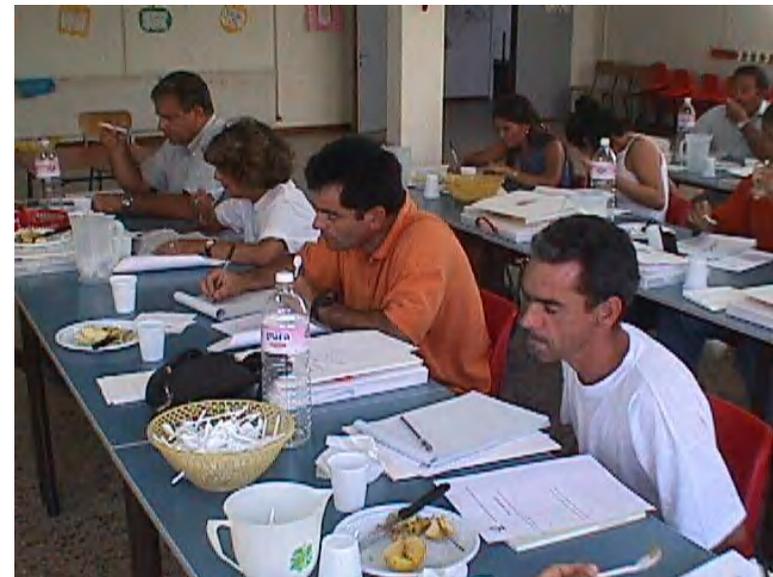
- 1979 1st course in Italy
- 1984 Institution of the "Improvement course in sensory analysis of honey"
- 1988 Start of the "National List of Experts in Sensory Analysis of Honey"
- 1999 Ministerial Decree n. 21547 of 28th May 1999 - modified with M.D. n. 17932 of 5th December 2008
- 2008 Institution of the "Improvement course in sensory analysis of honey 2nd level"

How do you get expert in honey sensory analysis?



- Introduction course to the sensory analysis of honey

(Four days long – 7 hours per day)



PROGRAM

Introduction course to the sensory analysis of honey

1st DAY

morning

- Sensory Analysis: general principles, essentials of sensory physiology, test room, materials and equipment, individual variation
- * Four taste tests: investigation of the sensitivity of the primary tastes (individual recognition of the primary tastes threshold)
- * Discrimination test: the sweet taste
- * Perception tests of taste, aroma and other mouth perception

afternoon

- * Olfactory test: recognition of standard odours
- * Perception, recognition and memorisation of the olfactory characteristics of some unifloral honeys
- The honey: origin, composition, physical and food properties

2nd DAY

morning

- The technique of tasting
- * Perception, recognition and memorisation of the olfactory, gustatory and aromatic characteristics of unifloral honeys
- * Discrimination test: triangle tests

afternoon

- * Blind test: olfactory recognition of unifloral honey
- * Testing of honeys with different textural structures.
- Crystallization: cause, technology, defects

3rd DAY

morning

- * Second tasting of unifloral honeys
- * Discrimination test: triangle tests

afternoon

- * Blind test: olfactory-gustatory recognition of unifloral honey
- Honey legislation
- Honey analyses

4th DAY

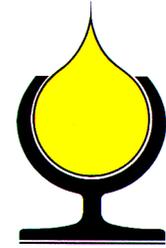
morning

- * Discrimination test: triangle tests
- * Recognition test of unifloral honey blends
- * Tasting of honey with different kinds of defects
- The honey defects: identification, cause, remedy and linked technology
- Possible uses of the sensory analysis technique
- Evaluation of honey: filling out the form
- * Guide to honey evaluation by the use of the forms
- * Evaluation of participants' honeys

afternoon

- Nutritional properties of honey
- Possible uses of honey in the kitchen
- * Combining tests honey-cheese
- Examination of the results, comments and final discussion
- Closing of the course and giving out of certificates

How do you get expert in honey sensory analysis?



○ Improvement course in sensory analysis of honey - 1st level

(Three days long – 7 hours per day)

Scheda per la valutazione di rispondenza

Codice d'assaggio: _____
Origine botanica dichiarata: _____

DIFETTI

Fermentazione _____ 10
Fumo _____ 10
Timolo _____ 10
Metallico _____ 10
Altro _____ 10
Indicare l'eventuale altro difetto: _____

RISPONDEZZA UNFLORALE

Caratteristiche olfattive _____ 10
Caratteristiche olfatto/gustative _____ 10
Note: _____
Data: _____ Firma: _____

BIOL MIEL

Evaluation form BIOL MIEL - edition 2008
UNFLORAL honey

Declared geographical origin: _____
Declared botanical origin: _____

Sample code: _____

Accepted limit: _____ Scale 0-10

Visual assessment

FRESHNESS _____
CLARITY _____
COLOUR-CORRESPONDENCE _____

DESCRIPTION: _____

Olfactory assessment

CORRESPONDENCE _____
FOREIGN ODOUR NO YES (sample rejected)
FERMENTED NO YES (sample rejected)

DESCRIPTION: _____

gustatory assessment

CORRESPONDENCE _____
FOREIGN TASTES NO YES (sample rejected)
FERMENTED NO YES (sample rejected)

DESCRIPTION: _____

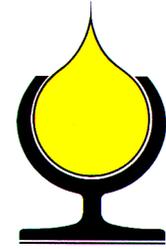
tactile assessment

TACTILE PLEASANTNESS _____

DESCRIPTION: _____
Date: _____ Assessor: _____



How do you get expert in honey sensory analysis?



- Improvement course in sensory analysis of honey - 2nd level

(Three days long – 7 hours per day)





***Ethical and Environmental Certification
Institute***



Honeybee and Silkworm Research Unit (CRA-API)



***National List of Experts in
Sensory Analysis of Honey***



Italian Consortium for Organic Products

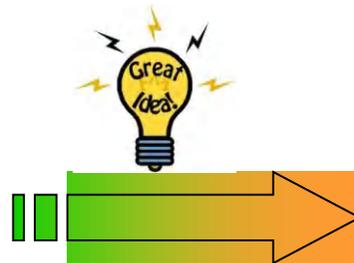


298 apicultural farms
controlled by ICEA in Italy

ICEA is active in many countries (24) in
the world for organic productions:

Albania, Bosnia, Bulgaria, Chile, Croatia, Cyprus, Emirates, Italy,
Japan, Laos, Lebanon, Madagascar, Malaysia, Mexico, Moldova,
Romania, Senegal, Syria, Thailand, Turkey, Uruguay, Uzbekistan,
Ukraine, Vietnam.

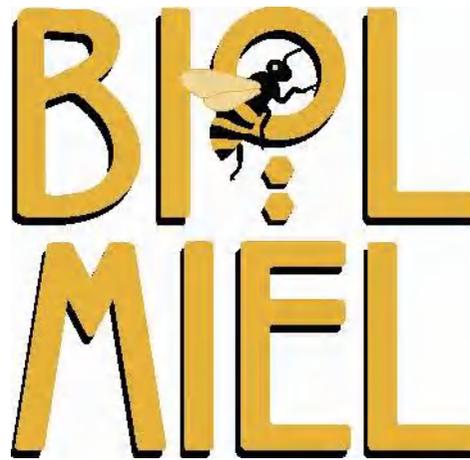
BIOL 1996
INTERNATIONAL PRIZE



BIOLFISH

2007

BIOL
MIEL



2008

Castelbuono
– Sicily –

96 samples



2009

Nicolosi
– Sicily –

132 samples



Parameters verification

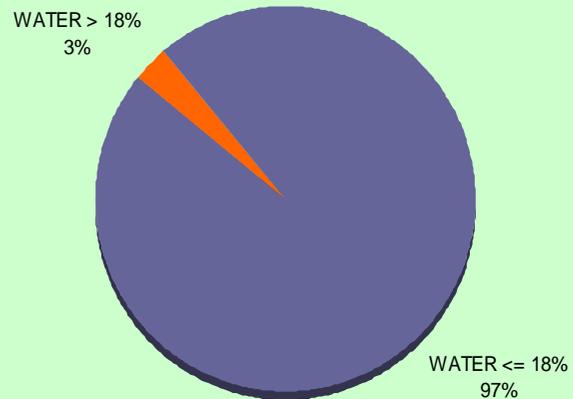
Limit beyond that the sample is eliminated:

Water => 18 %

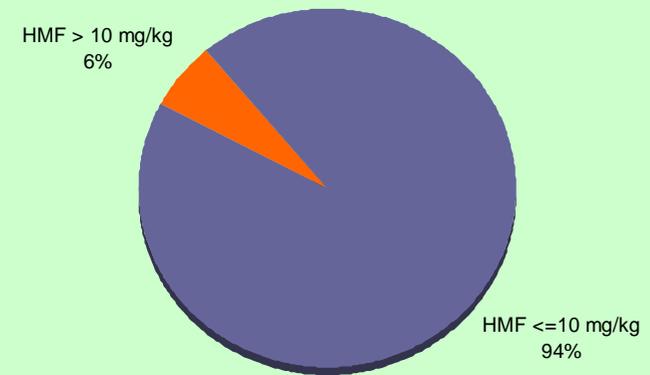
HMF > 10 mg/kg



WATER
SAMPLES EXCEEDING TOP LIMIT
(18 %)



HYDROXYMETHYLFURFURAL (HMF)
SAMPLES EXCEEDING TOP LIMIT
(10 mg/kg)



183

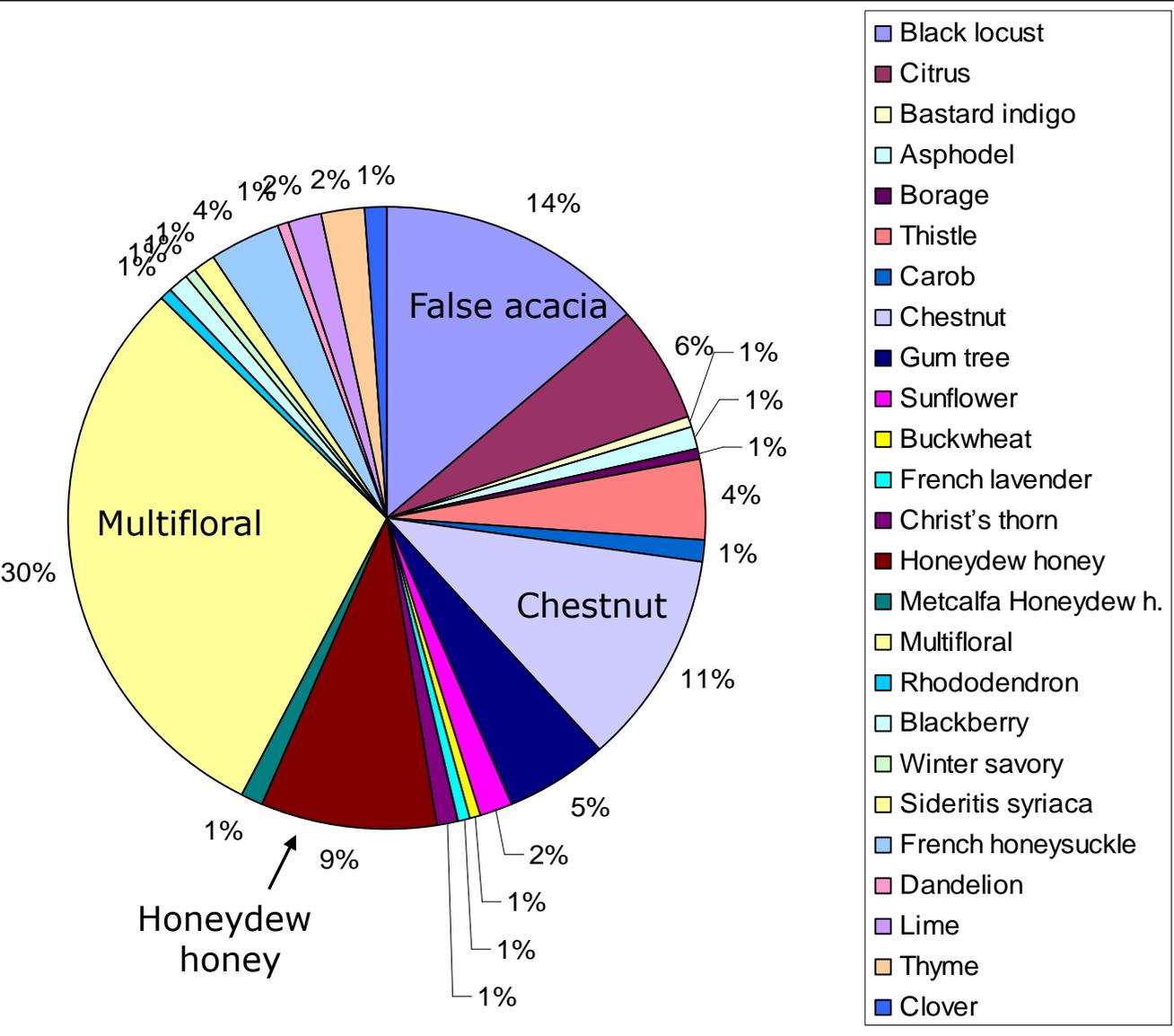
Italian honeys

24 types



- False acacia (*Robinia pseudoacacia*)
- Citrus (*Citrus* spp.)
- Bastard indigo (*Amorpha fruticosa*)
- Asphodel (*Asphodelus microcarpus*)
- Borage (*Borago officinalis*)
- Thistle (*Galactites tomentosa*)
- Carob (*Ceratonia siliqua*)
- Sweet chestnut (*Castanea sativa*)
- Gum tree (*Eucalyptus* spp.)
- Sunflower (*Helianthus annuus*)
- Buckwheat (*Fagopyrum esculentum*)
- French lavender (*Lavandula stoechas*)
- Christ's thorn (*Paliurus spina-christi*)
- Honeydew honey
- Multifloral
- Rhododendron (*Rhododendron* spp.)
- Blackberry (*Rubus* spp.)
- Winter savory (*Satureja montana*)
- Sideritis syriaca*
- French honeysuckle (*Hedysarum coronarium*)
- Dandelion (*Taraxacum officinale*)
- Lime (*Tilia* spp.)
- Thyme (*Thymus capitatus*)
- Clover (*Trifolium* spp.)

Italian honey taking part to the competition





45

Non Italian honey

From 11 nations

ALBANIA

USA (HAWAII)

BRAZIL

LEBANON

CROAZIA

MOLDAVIA

EGYPT

PALESTINE

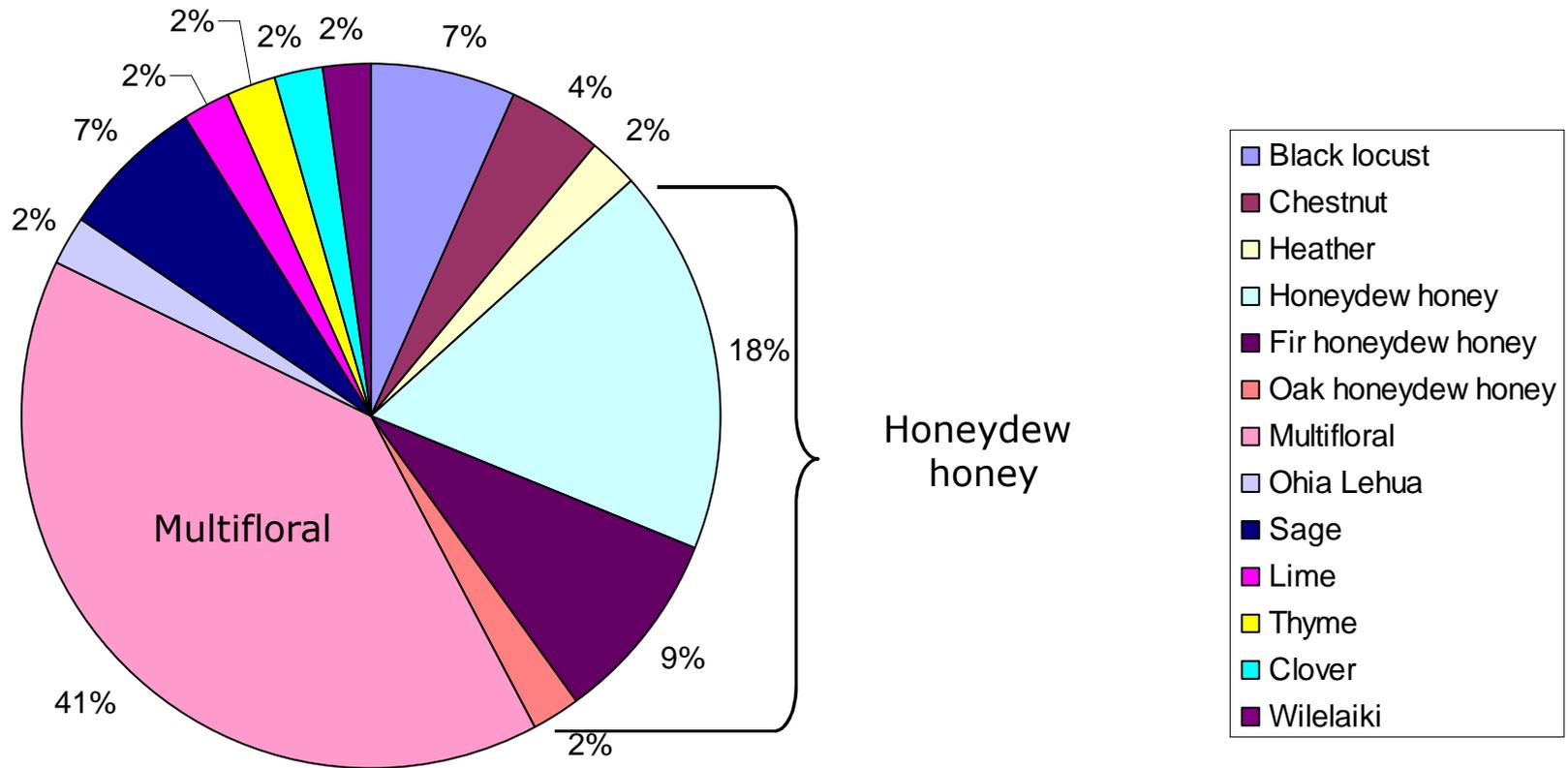
GREECE

SLOVENIA

SPAIN



Other honeys (45 samples) taking part to the competition



The composition of the international jury

Antonio Bentabol (*Spain*)
Drazen Lusic (*Croatia*)
Laura Gurini (*Argentina*)
Mojca Jamnik (*Slovenia*)
Nikos Kontolaimos (*Greece*)

Giancarlo Bruzzichini
Giuseppe Rosini
Irene Raimondo
Marco Valentini
Maria Paola Uccello
Raffaele Denami
Raffaele Dall'olio
Raimondo Floridaia
Sergio Massi





**BIOL
MIEL**



**Concorso BIOLMIEL
Parco dell'Etna – Nicolosi (CT)
21-23 gennaio 2010**

Rapporto di Prova

Richiedente: Az.Agr. Lo Spaventapasseri

Tipologia miele: MILLEFIORI

Numero e codifica campione data dal laboratorio: **3** - 09-IN01380

Data di Ricevimento campione: ottobre - dicembre 2009

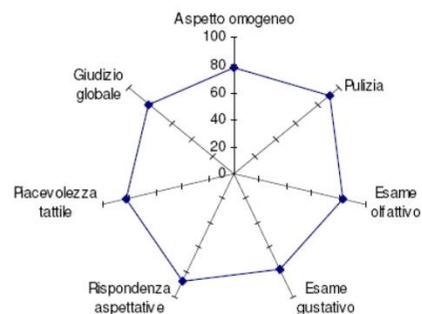
Data esecuzione Prove: gennaio 2010

Tipo di Analisi: Determinazione umidità (H₂O)
Determinazione idrossimetilfurfurolo (HMF)
Valutazione organolettica (giuria internazionale)

Risultato prova: Il campione in oggetto è risultato :

H ₂ O %	HMF mg/kg	Valutazione organolettica complessiva (punti ottenuti)
16,0	< 4	82,8
Valori limite per l'ottenimento dell'attestato		
<= 18 %	<= 10 mg/kg	=> 90/100

profilo sensoriale



GIUDIZIO FINALE: buono

Giudizio organolettico: presenza di macchie di retrazione, cristalli sabbiosi e non omogenei.

Bari,

Il DIRIGENTE

Il Capo Panel
Gian Luigi Marazzan
Gian Luigi Marazzan



Conclusions

- No differences between conventional and organic honey
- Attention in using volatile products

Honey competitions aim to:

- Better quality production by the beekeeper
- Sell honey in a better way
- Inform beekeepers about news and new regulations – the event is linked to a conference
- Inform consumers about organic honey and high level product
- Speak about organic and sustainability to consumers

Thank you for your attention



For participating, collaboration or proposals contact me

gianluigi.marcazzan@entecra.it