

Marketing Aspects of Product Quality Standardization on Honey Market

Andrić, Berislav; Erdogan, Ekiz; Gallaga, Emiliano

Source / Izvornik: **Beekeeping and Bee Products, 2023, 68 - 75**

Conference paper / Rad u zborniku

Publication status / Verzija rada: **Published version / Objavljena verzija rada (izdavačev PDF)**

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:277:067292>

Rights / Prava: [In copyright](#)/[Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2024-11-23**



Repository / Repozitorij:

[FTRR Repository - Repository of Faculty Tourism and Rural Development Požega](#)





**OSMI KONGRES O PČELARSTVU I PČELINJIM
PROIZVODIMA
God. 8, br. 1 (2023.)**

Zbornik sažetaka i cijelih radova sa Osmog kongresa o pčelarstvu i pčelinjim proizvodima
-s međunarodnim učešćem-
PČELARSTVO I PČELINJI PROIZVODI

Book of abstracts and full papers from eight Congress of beekeeping and bee products
-with international participation-
BEEKEEPING AND BEE PRODUCTS

ISBN (Osijek): 978-953-7005-88-7
EAN (Osijek): 9789537005887
ISSN (Tuzla): 2490-3159

Osijek i Tuzla, 2023.

ORGANIZATORI KONGRESA

Udruženje za nutricionizam i dijetetiku „HRANOM DO ZDRAVLJA“, BiH
Tehnološki fakultet Univerziteta u Tuzli, BiH
Prehrambeno-tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, HR
Fakultet turizma i ruralnog razvoja u Požegi Sveučilišta Josipa Jurja Strossmayera u Osijeku, HR

SUORGANIZATORI KONGRESA

The European Hygienic Engineering & Design Group - EHEDG
Savez pčelara Tuzlanskog kantona, BiH
Savez pčelara Unsko-sanskog kantona, BiH
Savez udruženja pčelara Kantona Sarajevo SUPKS, BiH
Komora magistara farmacije Tuzlanskog kantona, BiH
Multi Lab d.o.o Tuzla, BiH
JU Veterinarski zavod Bihać, BiH
Udruženje poljoprivrede i prehrambene industrije kantonalne privredne komora Tuzla, BiH
Institut za zdravlje i sigurnost hrane Zenica, BiH
Udruga narodnog zdravlja „Andrija Štampar“ Požega, HR
IZ u BiH Agencija za certificiranje halal kvalitete, BiH

ODRŽAVANJE KONGRESA PODRŽALI

Vlada kantona Sarajevo, Ministarstvo privrede, BiH
Vlada TK, Ministarstvo poljoprivrede, vodoprivrede i šumarstva TK, BiH
BH POŠTA, BiH
Općina Kakanj, BiH



Zbornik sažetaka i radova / Book of abstracts and papers	8. Kongres o pčelarstvu i pčelinjim proizvodima s međunarodnim učešćem PČELARSTVO I PČELINJI PROIZVODI 8 th Congress of beekeeping and bee products with international participation BEEKEEPING AND BEE PRODUCTS
Glavni urednici / Editors in chief	Midhat Jašić, Drago Šubarić
Urednik / Editor	Ivana Flanjak
Izvršni i tehnički urednik / Executive and technical editor	Azra Sinanović
Pomoćnici uredništva / Editorial assistants	Đurđica Ačkar, Damir Alihodžić, Blanka Bilić Rajs, Benjamin Čaušević
Uređivački i znanstveni odbor / Editorial and scientific board	Đurđica Ačkar, Damir Aličić, Damir Alihodžić, Jurislav Babić, Meho Bašić, Mejra Bektašević, Blanka Bilić Rajs, Mile Blesić, Janko Božić, Tijana Brčina, Dragan Bubalo, Asmir Budimlić, Daniela Čačić Kenjerić, Sead Čatić, Behija Dukić, Janja Filipi, Ivana Flanjak, Marija Glavaš Dodov, Slavica Grujić, Maša Islamčević, Midhat Jašić, Stela Jokić, Antun Jozinović, Mojca Korošec, Marin Kovačić, Ante Lončarić, Dražen Lušić, Muamer Mandra, Borislav Miličević, Radoslav Miličević, Vesna Milić, Benjamin Muhamedbegović, Ibrahim Mujić, Amra Odošević, Melisa Oraščanin, Mohamed Osman, Saša Prđun, Ljiljana Primorac, Zlatko Puškadija, Slađan Rašić, Besim Salkić, Violeta Santrač, Marizela Šabanović, Edina Šertović, Drago Šubarić, Ali Timucin Atayoglu, Milica Vilušić, Dubravka Vitali-Čepo, Domagoj Šubarić
Predsjedništvo kongresa / Presidency of the Congress	Sead Čatić (predsjednik), Senad Hodžić (podpredsjednik), Azra Sinanović (podpredsjednik, sekretar Kongresa), Borislav Miličević (podpredsjednik)
Članovi predsjedništva kongresa / Members of the Congress Presidency	Damir Alihodžić, Jurislav Babić, Sanel Hodžić, Midhat Jašić, Zlatko Jusufhodžić, Muamer Mandra, Drago Šubarić
Organizacioni odbor / Organising Committee	Đurđica Ačkar, Ivana Flanjak, Džemil Hajrić, Hazim Hodžić, Nejra Hodžić, Jasmina Ibrahimpašić, Antun Jozinović, Husnija Kudić, Boras Kvesić, Ante Lončarić, Dragan Nikić, Samir Omerović, Suad Selimović, Hajrudin Šabić, Domagoj Šubarić, Damir Barašin, Mahir Dević, Stanko Čuljak
Tehnički odbor / Technical Committee	Benjamin Čaušević, Vildana Džafić, Kemal Sejranović, Muamer Pašić
Medijski odbor / Media Committee	Benjamin Čaušević (web master), <u>Adnan Džonlić (medijska promocija)</u> , <u>Emina Ramić (medijska promocija)</u> , Azra Sinanović (social media administrator).
Medijski pokrovitelj / Media patron	Radio-televizija Tuzlanskog kantona
Programski odbor / Program Committee	Damir Alihodžić, Jurislav Babić, Benjamin Čaušević, Sead Čatić, Ivana Flanjak, Sanel Hodžić, Senad Hodžić, Midhat Jašić, Antun Jozinović, Muamer Mandra, Borislav Miličević, Azra Sinanović, Drago Šubarić

Izdavač / Publisher by Suizdavač / Co-Publisher	Udruženje za nutricionizam i dijetetiku „Hranom do zdravlja“, BiH Prehrambeno – tehnološki fakultet Sveučilišta Josipa Jurja Strossmayera u Osijeku, HR
Za izdavača / For publisher	Damir Alihodžić, Jurislav Babić
Tehnička priprema i dizajn / Technical preparation and design	Đuro Jelečević
Štampa / Print	Studio HS internet d.o.o.
Tiraž / Number of copies	300

Predgovor

Poštovani čitatelji,

Utjecaj klimatskih promjena vidljiv je u svim segmentima poljoprivrede i povezanim industrijama, pa tako i u pčelarstvu. Prilagođavanje tehnologije pčelarenja te uvođenje informacijskih tehnologija i sustava osiguranja kvalitete osigurava jake i zdrave pčelinje zajednice i proizvodnju kvalitetnih pčelinjih proizvoda. Kontinuirana edukacija pčelara neophodna je kako bi bili u korak s izazovima, ali i prednostima suvremenog pčelarstva. Kroz edukaciju i podizanje svijesti o značaju pčela za ekosustav i održivu proizvodnju od najranije dobi, stvara se društvo koje prepoznaje blagodati konzumacije pčelinjih proizvoda, nezamjenjivu ulogu pčela u očuvanju bioraznolikosti flore, i boljoj kvaliteti života općenito. Kvaliteta, sigurnost i zaštita potrošača koji koriste pčelinje proizvode kao i one koji sadrže pčelinje proizvode bitni su čimbenici koji utječu na odabir proizvoda u širokoj paleti sličnih na tržištu. Apiterapija postaje sve prisutnija u olakšavanju simptoma i liječenju mnogih bolesti.

O svim navedenim temama raspravljati će se na osmom Kongresu o pčelarstvu i pčelinjim proizvodima. Prilika je to za razmjenu znanja i iskustava akademske zajednice, stručnih i savjetodavnih tijela i pčelara.

Zahvaljujemo se svim članovima znanstvenog i organizacijskog odbora na sudjelovanju u pripremi i organizaciji kongresa i zbornika, a posebnu zahvalu upućujemo autorima radova prezentiranih na osmom Kongresu o pčelarstvu i pčelinjim proizvodima koji su na taj način dali doprinos kontinuitetu i kvaliteti kongresa.

Sarajevo, 10.11.2023.

izv. prof. dr. sc. Ivana Flanjak

PROGRAM
VIII KONGRESA O PČELARSTVU I PČELINJIM PROIZVODIMA
S MEĐUNARODNIM UČEŠĆEM, SARAJEVO, 2023.

PRVI DAN

subota, 18. novembar 2023. godine

REGISTRACIJA UČESNIKA / Registration of participants	08 30 - 10 00
PRESS KONFERENCIJA (KONGRESNA SALA HOTELA) / Press conference	09 30 - 10 00
CEREMONIJA OTVARANJA KONGRESA / Opening ceremony	10 00 - 11 00
PAUZA ZA OSVJEŽENJE / Coffee break	11 00 - 11 30
POZVANE PREZENTACIJE / Invited lectures	
Radno predsjedništvo / Chairmans: Damir Alihodžić, Samir Omerović, Violeta Santrač	11 30 – 12 30
Thomas Gloger TERAPIJA PČELINJIM OTROVOM ZA LIGAMENTE I TETIVE TE LIJEČENJE BOLI / BEE VENOM THERAPY (BVT) FOR LIGAMENT, SINEW AND PAIN TREATMENT	11 30 – 11 50
Mladenka Pestorić, Dubravka Škrobot, Jelena Tomić, Amina Magoda, Enida Članjak-Kudra, Muamer Mandra, Sanel Hodžić PIVOT PROFILE KAO MOGUĆA SENZORNA TEHNIKA ZA OTKRIVANJE PATVORENOG MEDA / PIVOT PROFILE AS A POSSIBLE SENSORY TECHNIQUE FOR DETECTING ADULTERATED HONEY	11 50 – 12 10
Violeta Santrač PESTICID HLORFENVINFOS OTKRIVEN U VITAMINSKO-MINERALNOM DODATKU ZA PČELU: FORENZIČKI SLUČAJ IZ 2014. / PESTICIDE CHLORFENVINFOS DETECTED IN VITAMIN AND MINERAL SUPPLEMENT FOR HONEY BEE: FORENSIC CASE REPORT FROM 2014	12 10 – 12 30
USMENE PREZENTACIJE / Oral presentations	
Radno predsjedništvo/Chairmans: Jurislav Babić, Mladenka Pestorić, Hajrudin Šabić	12 30 – 13 30
Domagoj Šubarić, Maja Karnoš, Antun Jozinović, Ante Lončarić, Vesna Rastija POTENCIJALNI TERAPEUTSKI UČINAK DERIVATA KUMARINA NA MEDONOSNE PČELE (<i>Apis mellifera</i>) / POTENTIAL TERAPEUTIC EFFECT OF COUMARIN DERIVATIVES ON HONEYBEES (<i>Apis mellifera</i>)	12 30 – 12 45

Blagojce Najdovski, Plamen Hristov PROTEINSKO GLADOVANJE PČELA KAO POSLJEDICA KLIMATSKIH PROMJENA I SVE UČESTALIJE LJETNJE SUŠE NA BALKANU / PROTEIN STARVATION OF BEES AS A CONSEQUENCE OF CLIMATE CHANGES AND MORE FREQUENT SUMMER DROUGHT IN THE BALKANS	12 45 – 13 00
Berislav Andrić, Ekiz Erdogan, Emiliano Gallaga MARKETINŠKI ASPEKTI STANDARDIZACIJE KVALITETE PROIZVODA NA TRŽIŠTU MEDA / MARKETING ASPECTS OF PRODUCT QUALITY STANDARDIZATION ON HONEY MARKET	13 00 – 13 15
Amna Bijedić, Harun Kurtagić, Mirela Mabić, Hanadija Omanović SADRŽAJ HMF-a U MEDU S PODRUČJA MOSTARA / HMF CONTENT IN HONEY FROM THE AREA OF MOSTAR	13 15 – 13 30
ZAJEDNIČKI RUČAK / Lunch break	13 30 – 14 30
POSTER PREZENTACIJE / Poster presentations	14 00 – 14 30
PANEL SESIJA: STANJE I PERSPEKTIVE PČELARSTVA U BOSNI I HERCEGOVINI I ZEMLJAMA REGIONA PANEL SESSION: SITUATION AND PERSPECTIVES OF BEEKEEPING IN BOSNIA AND HERZEGOVINA AND REGION COUNTRIES	14 30
Moderatori / Moderators: Senad Hodžić, Azra Sinanović	
Panelisti: 1. Boštjan Noč, Savez pčelara Slovenije 2. Dražen Kocet, Hrvatski pčelarski savez 3. Miljanić Radule, Savez pčelarskih organizacija Crne Gore 4. Mende Trajkovski, Savez pčelarskih udruženja Severne Makedonije 5. Rodoljub Živadinović, Savez pčelarskih organizacija Srbije 6. Stanko Rajić, Beogradsko udruženje pčelara 7. Sejo Deljo, Savez pčelara Federacije Bosne i Hercegovine 8. Damir Barašin, Savez udruženja pčelara Republike Srpske 9. Samir Omerović, Savez udruženja pčelara Kantona Sarajevo 10. Hajrudin Šabić, Savez pčelara USK	14 30 – 16 00
PAUZA ZA OSVJEŽENJE / Coffee break	16 00 - 16 30
NASTAVAK PANEL SESIJE / CONTINUATION OF THE PANEL SESSION	16 30 – 18 00
KRAJ PRVOG DANA / End of the first day	18 00
ZAJEDNIČKA VEČERA / Dinner	20 00

DRUGI DAN

nedjelja, 19. novembar 2023. godine

REGISTRACIJA UČESNIKA / Registration of participants	09 30 - 10 00
USMENE PREZENTACIJE / Oral presentations	
Radno predsjedništvo / Chairmens: Damir Barašin, Muamer Mandra, Domagoj Šubarić	10 00 – 10 45
Sabina Cviljević, Božica Lovrić, Muharem Zildžić, Anamarija Jurić, Midhat Jašić, Ivan Vukoja UČINAK PROPOLISA NA BAKTERIJU <i>Helicobacter pylori</i> / THE EFFECT OF PROPOLIS ON THE BACTERIA <i>Helicobacter pylori</i>	10 00 – 10 15
Nina Ilić UTICAJ PČELARSTVA I APITERAPIJE NA RAZVOJ DJECE I ADOLESCENATA / THE IMPACT OF BEEKEEPING AND APITHERAPY ON THE DEVELOPMENT OF CHILDREN AND ADOLESCENTS	10 15 – 10 30
Nela Drača, Ivana Flanjak, Blanka Bilić Rajs, Ivana Nemet KARAKTERIZACIJA SVJEŽE PČELINJE PELUDI S MELISOPALINOLOŠKOG I FIZIKALNO-KEMIJSKOG ASPEKTA / CHARACTERIZATION OF FRESH BEE POLLEN FROM MELISSOPALYNOLOGICAL AND PHYSICOCHEMICAL ASPECTS	10 30 – 10 45
USMENE PREZENTACIJE / Oral presentations	
Radno predsjedništvo / Chairmans: Nina Ilić, Antun Jozinović, Stanko Rajić	10 45 – 12 00
Ljiljana Primorac, Blanka Bilić Rajs, Ivana Flanjak ULOGA SENZORSKOG PANELA U OCJENI AUTENTIČNOSTI MEDA / THE SENSORY PANEL ROLE IN THE HONEY AUTHENTICITY EVALUATION	10 45 – 11 00
Sanida Šabotić – Adžović ISTRAŽIVANJE O STAVOVIMA I PRIMJENI APITERAPIJE ZA PREVENCIJU I LIJEČENJE BOLESTI KOD GRAĐANA U CRNOJ GORI / UNDERSTANDING AND CONVICTIONS OF APITHERAPY FOR DISEASE PREVENTION AND TREATMENT AMONG CITIZENS IN MONTENEGRO	11 00 – 11 15
Gordana Hegić, Zrinka Franić, Zdenko Franić PRAVNI OKVIR ZA OBAVLJANJE DJELATNOSTI APITERAPIJE / LEGAL FRAMEWORK FOR PERFORMING APITHERAPY ACTIVITIES	11 15 – 11 30
Snježana Ivić Gerovac NOVI TRENDVI U RAZVOJU APITURIZMA I APITERAPIJE U HRVATSKOJ / NEW TRENDS IN THE DEVELOPMENT OF APITOURISM AND APITHERAPY IN CROATIA	11 30 – 11 45
Lejla Mutapčić, Marija Glavaš Dodov, Merima Ibišević, Midhat Jašić FORMULACIJA I KARAKTERIZACIJA POLUČVRSTIH DOZIRNIH OBLIKA SA PČELINJIM OTROVOM / FORMULATION AND CHARACTERIZATION OF SEMI-SOLID DOSAGE FORMS WITH BEE VENOM	11 45 – 12 00
ZAKLJUČCI I PRIJEDLOG REZOLUCIJE / CONCLUSIONS AND RESOLUTION PROPOSAL	12 00 – 12 30
KRAJ DRUGOG DANA / End of the second day	12 30

POSTER PREZENTACIJE / POSTER PRESENTATIONS

Adnan Čučuković, Berin Rahmanović, Mirela Čučuković, Zinka Hojkurić Rahmanović
PROMJENE U SASTAVU I SVOJSTVIMA MEDA TOKOM ČUVANJA I ZAGRIJAVANJA /
HONEY COMPOSITION AND PROPERTIES CHANGES CAUSED DURING STORAGE AND
HEATING

Selma Kunić, Tijana Brčina, Ljilja Bojanović
KORELACIJA SPECIFIČNE OPTIČKE ROTACIJE I ELEKTROPROVODLJIVOSTI U
UZORCIMA NEKTARSKOG MEDA I MEDLJKOVCA SA PODRUČJA TUZLANSKOG
KANTONA (BOSNA I HERCEGOVINA) / CORRELATION OF SPECIFIC OPTICAL ROTATION
AND ELECTRICAL CONDUCTIVITY IN SAMPLES OF NECTAR HONEY AND HONEYDEW
HONEY FROM THE AREA OF TUZLA CANTON (BOSNIA AND HERZEGOVINA)

Besim Salkić, Ensar Salkić
POVEZANOST MEDONOSNE PČELE SA PRINOSOM I KVALITETOM VOĆA / CORRELATION
BETWEEN HONEYBEES AND FRUIT YIELD AND QUALITY

Danijela Šeremet, Petra Subotić, Ksenija Marković, Ana Mandura Jarić, Aleksandra Vojvodić Cebin, Nada
Vahčić, Draženka Komes
FORMULACIJA I KARAKTERIZACIJA FUNKCIONALNIH ČOKOLADNIH PRALINA S
PUNJENJEM NA BAZI MEDA / FORMULATION AND CHARACTERIZATION OF FUNCTIONAL
CHOCOLATE PRALINES WITH INCORPORATED HONEY-BASED FILLERS

Benjamin Čaušević, Midhat Jašić, Damir Alihodžić, Azra Sinanović, Senad Hodžić, Sulejman Alijagić
UNAPRJEĐENJE PČELARSKOG USPJEHA KROZ IZBJEGAVANJA GREŠAKA U
TEHNOLOGIJI / IMPROVING BEEKEEPING SUCCESS BY AVOIDING ERRORS IN TECHNOLOGY

Šejla Ibrahimbegović, Benjamin Čaušević
INTEGRACIJA IOT TEHNOLOGIJE I IMPLEMENTACIJA HACCP PRINCIPA U PČELARSTVU
/ INTEGRATION OF IOT TECHNOLOGY AND IMPLEMENTATION OF HACCP PRINCIPLES IN
BEEKEEPING

Damir Pavliček, Željko Cvetnić
ISPITIVANJE KAKVOĆE DOMAĆEG I UVOZNOG MEDA U HRVATSKOJ / QUALITY
CONTROL OF DOMESTIC AND IMPORTED HONEY IN CROATIA

SADRŽAJ / CONTENT

OPŠTE TEME / GENERAL TOPICS

Danijela Šeremet, Petra Subotić, Ksenija Marković, Ana Mandura Jarić, Aleksandra Vojvodić
Cebin, Nada Vahčić, Draženka Komes
**FORMULACIJA I KARAKTERIZACIJA FUNKCIONALNIH ČOKOLADNIH
PRALINA S PUNJENJEM NA BAZI MEDA / FORMULATION AND
CHARACTERIZATION OF FUNCTIONAL CHOCOLATE PRALINES WITH
INCORPORATED HONEY-BASED FILLERS**14

APITERAPIJA I APITURIZAM / APITHERAPY AND APITURISM

Sabina Cviljević, Božica Lovrić, Muharem Zildžić, Anamarija Jurić, Midhat Jašić, Ivan Vukoja
**UČINAK PROPOLISA NA BAKTERIJU *Helicobacter pylori* / THE EFFECT OF
PROPOLIS ON THE BACTERIA *Helicobacter pylori***18

Thomas Gloger
**TERAPIJA PČELINJIM OTROVOM ZA LIGAMENTE I TETIVE TE LIJEČENJE
BOLI / BEE VENOM THERAPY (BVT) FOR LIGAMENT, SINEW AND PAIN TREATMENT**21

Gordana Hegić, Zrinka Franić, Zdenko Franić
**PRAVNI OKVIR ZA OBAVLJANJE DJELATNOSTI APITERAPIJE / LEGAL
FRAMEWORK FOR PERFORMING APITHERAPY ACTIVITIES**22

Nina Ilić
**UTICAJ PČELARSTVA I APITERAPIJE NA RAZVOJ DJECE I ADOLESCENATA
/ THE IMPACT OF BEEKEEPING AND APITHERAPY ON THE DEVELOPMENT OF
CHILDREN AND ADOLESCENTS**24

Snježana Ivić Gerovac
**NOVI TRENDovi U RAZVOJU APITURIZMA I APITERAPIJE U HRVATSKOJ /
NEW TRENDS IN THE DEVELOPMENT OF APITOURISM AND APITHERAPY IN CROATIA**26

Lejla Mutapčić, Marija Glavaš Dodov, Merima Ibišević, Midhat Jašić
**FORMULACIJA I KARAKTERIZACIJA POLUČVRSTIH DOZIRNIH OBLIKA SA
PČELINJIM OTROVOM / FORMULATION AND CHARACTERIZATION OF SEMI-
SOLID DOSAGE FORMS WITH BEE VENOM**28

BOLESTI PČELA I TEHNOLOGIJA PČELARENJA / BEE DISEASES AND BEEKEEPING TECHNOLOGY

Benjamin Čaušević, Midhat Jašić, Damir Alihodžić, Azra Sinanović, Senad Hodžić, Sulejman Alijagić
**UNAPRJEĐENJE PČELARSKOG USPJEHA KROZ IZBJEGAVANJA GREŠAKA U
TEHNOLOGIJI / IMPROVING BEEKEEPING SUCCESS BY AVOIDING ERRORS IN
TECHNOLOGY**32

Šejla Ibrahimbegović, Benjamin Čaušević
**INTEGRACIJA IOT TEHNOLOGIJE I IMPLEMENTACIJA HACCP PRINCIPA U
PČELARSTVU / INTEGRATION OF IOT TECHNOLOGY AND IMPLEMENTATION
OF HACCP PRINCIPLES IN BEEKEEPING**34

Besim Salkić, Ensar Salkić POVEZANOST MEDONOSNE PČELE SA PRINOSOM I KVALITETOM VOĆA / CORRELATION BETWEEN HONEYBEES AND FRUIT YIELD AND QUALITY	36
Violeta Santrač PESTICID HLORFENVINFOS OTKRIVEN U VITAMINSKO-MINERALNOM DODATKU ZA PČELU: FORENZIČKI SLUČAJ IZ 2014. / PESTICIDE CHLORFENVINFOS DETECTED IN VITAMIN AND MINERAL SUPPLEMENT FOR HONEY BEE: FORENSIC CASE REPORT FROM 2014	38
Domagoj Šubarić, Maja Karnoš, Antun Jozinović, Ante Lončarić, Vesna Rastija POTENCIJALNI TERAPEUTSKI UČINAK DERIVATA KUMARINA NA MEDONOSNE PČELE (<i>Apis mellifera</i>) / POTENTIAL TERAPEUTIC EFFECT OF COUMARIN DERIVATIVES ON HONEY BEES (<i>Apis mellifera</i>).....	40
STANDARDIZACIJA I KVALITET PČELINJIH PROIZVODA / STANDARDIZATION AND QUALITY OF BEE PRODUCTS	
Adnan Čučuković, Berin Rahmanović, Mirela Čučuković, Zinka Hojkurić Rahmanović PROMJENE U SASTAVU I SVOJSTVIMA MEDA TOKOM ČUVANJA I ZAGRIJAVANJA / HONEY COMPOSITION AND PROPERTIES CHANGES CAUSED DURING STORAGE AND HEATING.....	44
Nela Drača, Ivana Flanjak, Blanka Bilić Rajs, Ivana Nemet KARAKTERIZACIJA SVJEŽE PČELINJE PELUDI S MELISOPALINOLOŠKOG I FIZIKALNO-KEMIJSKOG ASPEKTA / CHARACTERIZATION OF FRESH BEE POLLEN FROM MELISSOPALYNOLOGICAL AND PHYSICOCHEMICAL ASPECTS.....	46
Selma Kunić, Tijana Brčina, Ljilja Bojanović KORELACIJA SPECIFIČNE OPTIČKE ROTACIJE I ELEKTROPROVODLJIVOSTI U UZORCIMA NEKTARSKOG MEDA I MEDLJKOVCA SA PODRUČJA TUZLANSKOG KANTONA (BOSNA I HERCEGOVINA) / CORRELATION OF SPECIFIC OPTICAL ROTATION AND ELECTRICAL CONDUCTIVITY IN SAMPLES OF NECTAR HONEY AND HONEYDEW HONEY FROM THE AREA OF TUZLA CANTON (BOSNIA AND HERZEGOVINA)	48
Damir Pavliček, Željko Cvetnić ISPITIVANJE KAKVOĆE DOMAĆEG I UVOZNOG MEDA U HRVATSKOJ / QUALITY CONTROL OF DOMESTIC AND IMPORTED HONEY IN CROATIA.....	50
Mladenka Pestorić, Dubravka Škrobot, Jelena Tomić, Amina Magoda, Enida Članjak-Kudra, Muamer Mandra, Sanel Hodžić PIVOT PROFILE KAO MOGUĆA SENZORNA TEHNIKA ZA OTKRIVANJE PATVORENOG MEDA / PIVOT PROFILE AS A POSSIBLE SENSORY TECHNIQUE FOR DETECTING ADULTERATED HONEY	52
Ljiljana Primorac, Blanka Bilić Rajs, Ivana Flanjak ULOGA SENZORSKOG PANELA U OCJENI AUTENTIČNOSTI MEDA / THE SENSORY PANEL ROLE IN THE HONEY AUTHENTICITY EVALUATION.....	54

TEHNIČKE PREZENTACIJE / TECHNICAL PRESENTATIONS

Dražen Kocet, Stanko Čuljak

POTPORE PČELARSTVU U EUROPSKOJ UNIJI / SUBSIDIES BEEKEEPING IN CROATIA AS A MEMBER OF THE EUROPEAN UNION.....56

David Mardešić, Stanko Rajić, Dario Mardešić

POVEĆANJE ZNANJA O ZNAČAJU PČELA, ZAŠTITI PČELA TE ZNAČAJU KONZUMACIJE PČELINJIH PROIZVODA PUTEM EDUKACIJE DECE / INCREASE THE KNOWLEDGE OF THE IMPORTANCE OF BEES, THE PROTECTION OF BEES AND THE SIGNIFICANCE OF CONSUMING BEE PRODUCTS THROUGH CHILDREN EDUCATION58

CJELOVITI RADOVI / FULL PAPERS

Sanida Šabotić – Adžović

ISTRAŽIVANJE O STAVOVIMA I PRIMJENI APITERAPIJE ZA PREVENCIJU I LIJEČENJE BOLESTI KOD GRAĐANA U CRNOJ GORI / UNDERSTANDING AND CONVICTIONS OF APITHERAPY FOR DISEASE PREVENTION AND TREATMENT AMONG CITIZENS IN MONTENEGRO62

Berislav Andrić, Ekiz Erdogan, Emiliano Gallaga

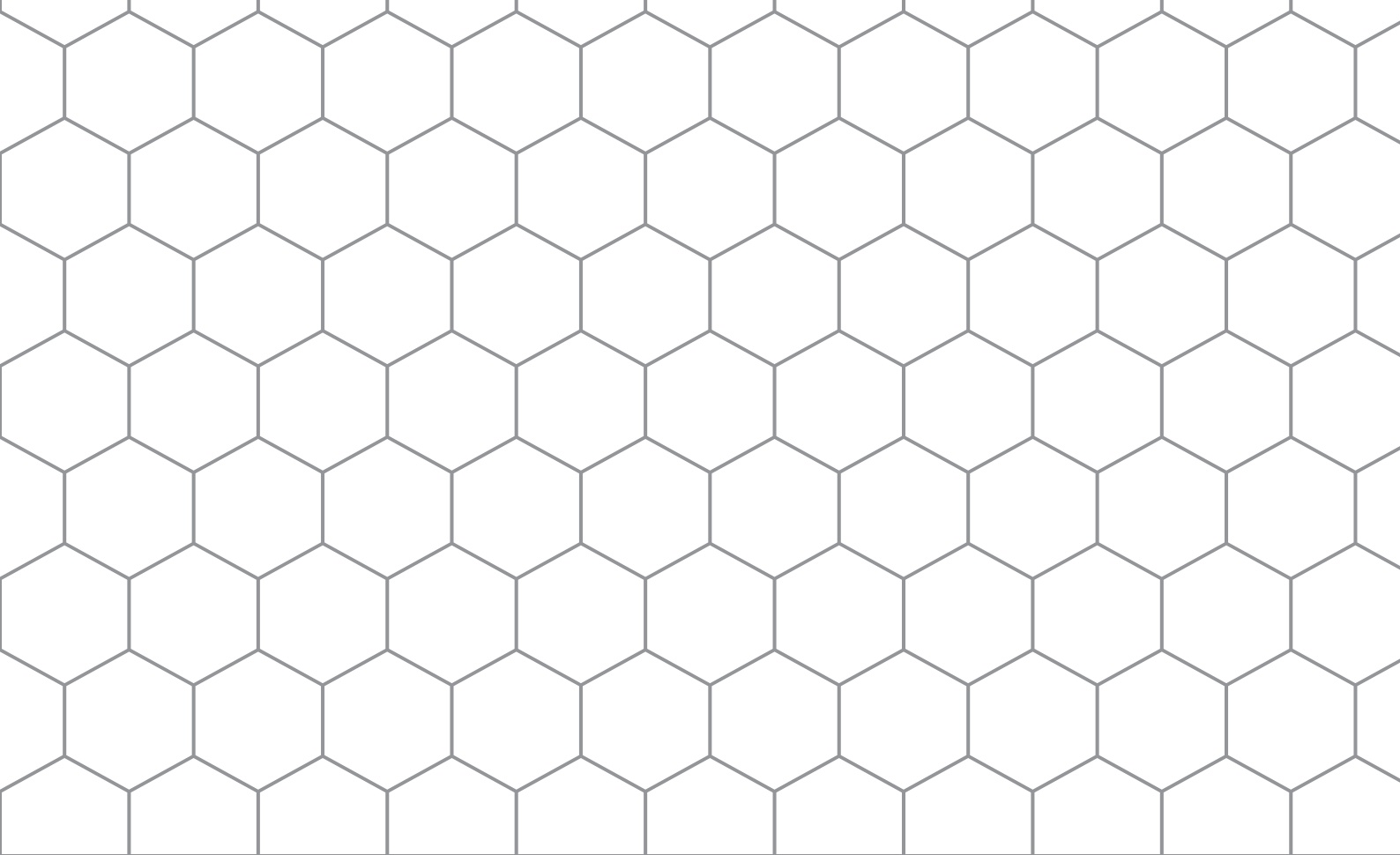
MARKETINŠKI ASPEKTI STANDARDIZACIJE KVALITETE PROIZVODA NA TRŽIŠTU MEDA / MARKETING ASPECTS OF PRODUCT QUALITY STANDARDIZATION ON HONEY MARKET.....68

Amna Bijedić, Harun Kurtagić, Mirela Mabić, Hanadija Omanović

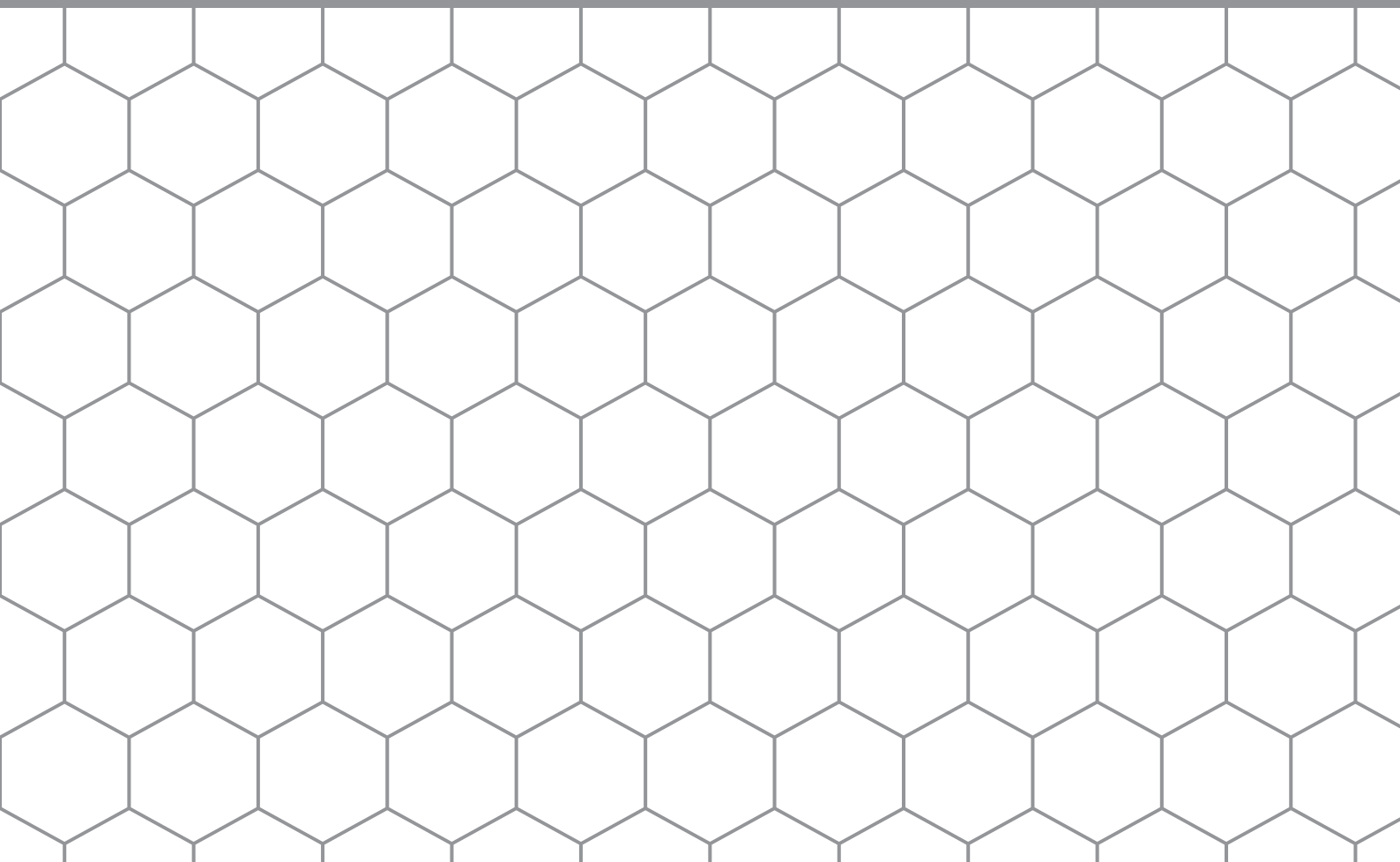
SADRŽAJ HMF-a U MEDU S PODRUČJA MOSTARA / HMF CONTENT IN HONEY FROM THE AREA OF MOSTAR.....76

Blagojce Najdovski, Plamen Hristov

PROTEINSKO GLADOVANJE PČELA KAO POSLJEDICA KLIMATSKIH PROMJENA I SVE UČESTALIJE LJETNJE SUŠE NA BALKANU / PROTEIN STARVATION OF BEES AS A CONSEQUENCE OF CLIMATE CHANGES AND MORE FREQUENT SUMMER DROUGHT IN THE BALKANS81



OPŠTE TEME
GENERAL TOPICS



MARKETING ASPECTS OF PRODUCT QUALITY STANDARDIZATION ON HONEY MARKET

👤 Berislav Andrić¹, Ekiz Erdogan², Emiliano Gallaga³

📍 ¹ J. J. Strossmayer University of Osijek, Faculty of Tourism and Rural Development Požega, 34000 Požega, Vukovarska 17, Croatia

² Hotel Management and Tourism Faculty, Central Asian University, 264, Milliy bog street, Barkamol MFY, Mirzo Ulugbek district, 111221 Tashkent, Uzbekistan

³ Universidad de Ciencias y Artes de Chiapas, Av 1a. Sur Pte No. 1460, Col. Centro, Caleras Maciel, 29014 Tuxtla Gutiérrez, Mexico

✉ bandrlic@fttr.hr

review paper

Abstract

Inasmuch as honey is except for natural consumption aimed for the market, Croatian bidders have to direct their efforts according to market demand. The aim of marketing is to know and understand the customer so well that the product fits him and sells itself. Ideally, marketing should result in a customer who is ready to buy. The marketing concept rests on four pillars: target market, customer needs, integrated marketing, and profitability. Marketing activities are not the mission of only beekeepers. Beekeeping associations, traders, hospitality industry and government must also give insight in marketing. In this paper hypothesis is that Croatian beekeepers should use market research to see what product customers want. They must use marketing management, which is the process of planning and executing the conception, pricing, promotion, and distribution of honey and other beehive products to create exchanges that satisfy individual and organizational profitable goals. At the end, in competitive EU market, it would be useful to use standardization of quality using product specification „Slavonski med” (It is defined European PDO-Protected Designation of Origin), so regarding some ideas are given how to introduce it on the market.

Keywords: honey, marketing, standardization

Introduction

The motivation for writing this paper was to point the necessity of applying marketing, as an essential prerequisite for survival and competitiveness on the Croatian, European and world honey market, through the analysis of marketing functions. In this work, the focus is on the honey that is directly aimed at the end consumer-buyer. In doing so, in this paper deals not only with noticing problems in the field of marketing and the honey market, but also propose their solution. The problem that is noticed that honey producers have problem with import of low quality honey on the market from other countries, so in this paper are tips for Croatian beekeepers to apply a marketing concept, which would enable them to sell much easier, because sales can only have a full effect if it works coordinated with other marketing activities. This implies that the sale of honey operates under the assumption that the honey market has been researched, that the kind of honey that is in demand is produced, that the price is regulated according to the market and competition, and that the consumer market is prepared for sales through promotion. Furthermore, by using the standardization of “Slavonski med”, and using international market and standardization experiences, it is possible to raise the competitiveness of honey as a product.

Characteristics of honey market

Beekeeping was considered a hobbyist job - the job of an enthusiast, but in recent years, it has undergone substantial changes and more and more inclining toward the professionalism. Starting from the assumption that honey, as the most important bee product, is not intended only for consumption, but also for the market, it is believed that beekeeping should become an economic activity that should be taken care of in addition to beekeepers, beekeeping equipment manufacturers, honey consumers and the state. It is known that two opposing elements - supply and demand - face each other on the market. As far as honey suppliers are concerned, they will be primarily interested in sales growth, increasing their market share, reducing business risks, and making a profit. As a rule, honey buyers will be interested in high-quality honey at affordable prices, with deliveries on time. The price is formed by the interaction of supply and demand on the honey market. In addition to the price, other factors will affect the supply and demand of honey, which directly represent obstacles to the marketing of honey (Meler, 2002):

- seasonal character of the honey offer,
- instability of honey supply,
- different quality of honey,
- the number of inhabitants and their economic power,
- uneducated consumers,
- changing the state and form in which honey is offered on the market,
- weather conditions, the influence of which can be eliminated almost entirely or only to a lesser extent.

We can state that the honey market is extremely unstable. Supply and demand is uneven, there is a large price disparity, and uncontrolled export and import, which is then directly reflected in its price, and then in its consumption. Honey has a very different consumption. In addition to being consumed by households, it is also consumed by hospitals, kindergartens, schools, the army, etc. As most of the produced honey is consumed in Croatia itself, the domestic demand for honey is of great importance for beekeepers. In the analysis of domestic demand, the economic power of the

inhabitants must be taken into account. The share of food expenses in Croatia is the highest among non-agricultural and mixed households with higher incomes, while the low share of food expenses of agricultural households is the result of their low incomes and at the same time a high degree of natural consumption.

An overview based on the available data from Eurostat, the European Commission's databases is listed below (Eurostat, 2023):

- **Production:** The European Union produced around 200,000 to 250,000 tons of honey annually. The main honey-producing countries within the EU were Spain, Romania, Hungary, Germany, and Greece.
- **Consumption:** EU citizens consumed on average around 1.3 kg of honey per year. As mentioned, Germany was the leading consumer, followed by countries like France and Spain.
- **Imports:** The EU imported approximately 200,000 tons of honey annually, accounting for almost 20% of the world's total honey imports. The main countries from which the EU imported honey were China, Ukraine, Argentina, and Mexico.
- **Exports:** The EU also exported honey, though in much smaller quantities compared to its imports. The main export destinations were the USA, Switzerland, and Japan, among others.
- **Price Volatility:** The honey market in the EU experienced price volatility due to factors like weather conditions affecting local production, changing global market conditions, and variations in import levels.
- **Challenges:** The EU honey sector faced challenges like declining bee populations, pests and diseases affecting bee health (e.g., the *Varroa destructor* mite), and competition with cheaper imported honey.

Export costs are high, because honey must be filled in so-called euro-barrels (one 300-kilogram barrel costs 25 euros), due to transportation costs, and the costs of homogenization, i.e. honey quality control, amount to 0.2 euros per a kilogram. In order to sell honey stocks, beekeepers can increase the direct sale of honey, and in connection with this, it is suggested that promotional activities on local media

be increased, using social networks (Instagram, Facebook). The lack of honey on the world market is caused by climate disturbances, because it is important to have a „clean“environment for this traditional agricultural production. It is opinion that promoting „clean“environment is an opportunity for Croatian honey producers.

Conception of the marketing mix on the honey market

It is believed that it is not possible to expect progress in beekeeping if the marketing concept is not applied. In order to realize such a concept, it is necessary for the state to encourage the adoption of a series of measures (Kolega, 1994):

- encourage production cooperation for foreign markets,
- promote the consumption of bee products,
- promote beekeeping production due to the invaluable benefit of pollination of cultivated plants,
- encourage large farmers to invest in apiaries and credit these investments.

Modern marketing means a business activity that connects production with consumption so that the needs of society, which appear on the market as demand, are maximally, and profitably, met. Therefore, the concept of marketing includes all activities of the provider from production to the market, that is, to harmonize the interests of producers and consumers in the best possible way. Honey producers must be aware of the fact that marketing activity begins before the product is created and continues long after its sale, constantly pointing out what is happening in the market and constantly looking for ways to increase customer satisfaction, for which honey is produced. The meaning and purpose of marketing as a business philosophy can be expressed in different ways, but the essence comes down to the fact that the buyer-consumer is always in the center of attention. It is of particular importance that the honey is in accordance with the needs of the consumer, since the consumer is in the center of marketing attention, so all marketing activities should be directed towards him with the aim of satisfying his needs, while at the same time making a profit. Such a principle of

putting the customer before the production itself is by far the most logical and profitable way of conducting business. The product honey belongs to the primary human needs (it has been used as food and medicine since ancient times) and to a lesser extent to the needs of a higher order (for care and beautification of the face and body).

Marketing thinking of honey producers should become a necessity in today's competitive world, in which the winners will be:

- who carefully analyze the needs of honey consumers,
- identify their possibilities and
- sell type of honey in accordance with consumer needs.

Respecting the previous setting, it is believed that based on the results of honey market research, it is possible to produce honey of the highest quality, which, in terms of color, appearance, smell, taste, in special packaging with appropriate price and promotion, will find safe sales in the country and abroad.

Market research

Globalization has strengthened the flow of information and technology across borders (Ramanathan et al., 2022). There is no real marketing without market research, and the modern economy is unthinkable without marketing. Honey suppliers should know what the market is looking for, so that they do not produce and offer such products that do not suit anyone (in terms of properties, quantity, or price) and thus becomes economically powerless. On the other hand, the honey producer, who successfully sells honey, earns income that not only covers all production costs (depreciation of fixed assets, material and energy costs, and labor costs) but also makes a profit.

In order to be able to produce quality honey, which the market will accept, beekeepers must rely on the information they receive:

- by researching the offer (analytically evaluate the offer of competitors and their product policy),
- demand research (recognizing consumer needs, their nature and features, purchasing power, and motivation, etc.).

It should be borne in mind that the needs of honey buyers are not constant and are subject to change. Acknowledging this fact, the question arises as to how the consumption habits and priorities of honey consumers will develop in the future, especially regarding:

- desirable quality of honey,
- what needs to be done to improve the image of domestic honey and reduce imports?,
- purchasing habits - will consumers continue to buy honey on the “gray” market in the future, or will they, with the rise in living standards, prefer purchases from highly organized stores?

These and similar questions can only be answered by specialized marketing organizations that will professionally deal with honey market research. Since market segmentation is the most effective part of honey consumer analysis in order to discover the causes of demand, honey market segmentation research can determine consumer needs for each market segment. For example, some consumer segments will demand more black locust and others, like sage honey.

Product as marketing-mix element

The quality of honey in the conditions of an underdeveloped market hardly interested honey producers, because consumers did not pay attention to these properties. In the conditions of increased economic power due to the increase in income, there is an unsuspected increase in the quality of honey. Honey is a natural product that honeybees obtain by processing nectar and honeydew in the honey sac. Honey produced from nectar is called nectar or floral honey. Honeydew is the sugar-rich excretion produced by a great variety of phloem-feeding insects (various types of aphids, scale insects, leafhoppers and planthoppers). Honey produced from honeybees is called honeydew honey. Bees collect nectar or honeydew in nature and bring them to the hive in their honey sac. The further procedure consists in the fact that the bees deposit nectar or honeydew in the cells of the comb, but only up to half of the cell so that the excess water from the nectar evaporates as soon as possible. Excess water is removed by repeatedly transferring it from the honeycomb cells, and by aerating the hives. At the same time, under the action of transforming,

the concentration of sugar in the nectar increases, which over time leads to thickening of the nectar and its transformation into honey. The legal requirements include standards and methods for the determination of the following quality factors of honey: moisture, ash, acidity, HMF, apparent reducing sugars, apparent sucrose, diastase activity and water-insoluble matter (Bogdanov et al., 1999).

The color, taste, aroma and texture of honey depend on the flower nectar from which it was obtained (sage, lime, chestnut, black locust, lavender, thyme, sunflower and many other species). For these reasons, they are different from location to location. With the influence of other plants that bloom at the time of the main nectar flow, the color and taste vary from year to year even in the same location. Honey is not a uniform product, its composition changes depending on the composition of the raw materials from which the honeybees produce honey, depending on the season. The color, aroma, structure and quality of honey depend on the source of the nectar, as well as on its production. Depending on the production, honey can be extracted (obtained by centrifugation), melted (obtained by heating crushed combs), as honeycomb honey and honey with honeycomb pieces. The most important market property of honey is the quality of the honey, which is measured according to the quality of the bee pasture. The quality of Croatian honey should be highlighted through the various types of honey that can be produced due to our geographical location, which offers a range of climate conditions from the Pannonian, through mountainous, to the Adriatic climatic regions. This diversity in climate conditions allows for the production of a wide array of high-quality honey, each with its own unique flavor profile, making our honey products truly exceptional. In conclusion, Croatian honey, shaped by the diverse climatic regions of our geography, is a testament to the rich and varied natural resources at our disposal, setting us apart as a producer of exceptional, region-specific honey varieties.

Logistics and distribution of the honey

The task of sales is to sell the produced honey to consumers, in this way, by exchanging it for money, at the market price, cover the costs, and make a profit. In the pre-marketing era, sales had the task of selling what was produced and achieving the

best possible price. Today in marketing, sales work under the assumption that the market has been researched, that the products for which there is a demand are produced, that the price is regulated according to the market and competition and that the consumer market is prepared for sales through promotion.

Distribution is a set of actions related to the selection of delivery channels and the physical delivery of honey from the producer to the consumer. The system of direct sale of honey is the most important sales channel. In such conditions, mistrust develops among trade actors, and strong unfair competition caused by direct sales occurs. It is believed that it is necessary to eliminate the gray economy in the sale of honey on the domestic market. In the retail sale of honey, in Croatia, in addition to retail supermarkets (approx. 50%), retail markets (approx. 40%) still occupy a significant place, while the remaining part of sales takes place through small independent retail stores (approx. 10%). In addition to direct sales, other honey distribution channels are also represented. The next sales channel is the sale of honey directly through beekeeping centers. The number of sales beekeeping centers should be increased so that there is one beekeeping center for every 100 000 consumers. Sales stands of beekeeping cooperatives sell honey and other bee products at cooperative retail market stands. (Brščić et al., 2017). Retail stores of macrobiotic products with a share of bee products are very suitable for selling honey. All products sold in this way would have to have a product number created and written guidelines for an acceptable product of biological production from clean areas. Selective sales of quality honey would take place in stores for consumption by top consumers. In a special so-called garden centers, in addition to bee products, sell beekeeping tools and supplies. Resellers or traders who ship these products to wider retail and export also sell honey.

Honey price as marketing-mix element

From a marketing point of view, the price of honey should not behave independently, but should be coordinated with other elements of the marketing mix (Wu et al., 2015). For example, it must correspond to the quality of the honey, it must follow the policy of the distribution channels, and

advertising messages must be appropriate for the price of the offer. It should be borne in mind that the price of honey significantly affects the level of sales. The higher the price, the lower the demand, and the lower the price, the higher the demand for honey. Honey prices are highly classified, from the lowest (like for rape honey) to some types of honey, the price in Croatia is 50% higher than world honey prices. It is noticed that honey prices are too high in stores. Our consumers, especially pensioners, cannot buy it because of the high prices in stores. In the store you can buy a 900 gr jar of honey for 9 EUR. There is the opinion that the high margins are unjustified since honey is not a perishable commodity. The very fact that the retail network earns up to three times more per kilogram than the producer does contributes to the decreasing consumption of honey in Croatia. Because of this, honey is still mostly used as a medicine, and not as an equal food product.

Promotion as marketing-mix element on honey market

Promotional activities are continuous communication processes of exchanging information, messages and incentives between the producer and the environment for creating a favorable attitude about the product. Honey producers can carry out their promotion in accordance with their business goals, most often through (Šedík et al., 2018):

- economic propaganda - advertising through the media,
- personal sales - the seller is the basis of promotion,
- sales promotion - display of goods at exhibitions, fairs, and tastings,
- economic publicity - by means of articles in the press, consultations, public forums and lectures, and articles in various publications to create a favorable image of the product and the manufacturer,
- public relations - the manufacturer influences public opinion.

It is a fact that the action of promotion can be effective only if it works coordinated with other marketing functions. For example, if the honey is of poor quality, the price is unacceptable on the

market, sales and distribution are inappropriate for the needs of consumers - promotional activities will be ineffective, because promotion cannot compensate for the shortcomings of other functions, but it can confirm them through promotion, if they deserve it with their quality. That promotion with an increase in income can have the greatest effect on increasing the consumption of honey. Promotion can only be achieved by strengthening economic entities, which will be able to invest in marketing. Likewise, business entities should invest in the education of honey consumers, as well as future and potential beekeepers. We believe that beekeepers must constantly work to strengthen their reputation among consumers. It is certain that beekeepers must not call their reputation into question with unargued and unprofessional statements in public. By creating doubts about the originality of honey, the already small consumption of honey in Croatia is reduced, and the success of businesspersons who invest in promotion is made more difficult.

„Slavonski med“ as a form of quality standardization – results and discussion

Slavonia, the eastern region of Croatia, has maintained beekeeping traditions that span centuries. This part of Croatia is characterized by pristine natural landscapes, old oak forests, and an abundance of floral diversity, all of which contribute to the quality of honey produced here (Kraljić, 2002). The particular climatic conditions and rich biodiversity of Slavonia lend its honey a unique flavor profile, color, and texture. Predominant nectar sources include lime, black locust, chestnut, and sunflower, each contributing to distinct varieties of Slavonian honey. The label “Slavonski med” is not just about geography but also encompasses the history, tradition, and skill of Slavonian beekeepers. Recognizing its distinctiveness and cultural importance, the European Union has granted it a protected designation of origin (PDO) status (European Commission, 2019). This not only safeguards its quality but also ensures that the consumers get an authentic product. Slavonian honey is not just a sweetener. It boasts numerous health benefits, from antimicrobial properties to acting as an antioxidant powerhouse. Due to its unique flora origin, it contains a range of beneficial compounds not found in other honey varieties (Matić, 2018).

In the Official Journal of the European Union, L 17 of January 23, 2018, the following was published: Commission Implementing Regulation (EU) 2018/95 of January 9, 2018 on the entry of names into the register of protected designations of origin and protected geographical indications (“Slavonski med” - PDO). “Slavonski med” is distinguished by its freshness (HMF value max. 16.5 mg/kg) and with a water content of up to a maximum of 18.3%. “Slavonski med” has a pollen spectrum or the presence of plant species in “secondary pollen” from the families *Brassicaceae*, *Rosaceae* and *Robinia* spp. in most single-flowered and multi-flowered honeys, which is how it differs from honey produced in other areas. The characteristics of “Slavonski med” are reflected in its physical, chemical, melissopalynological and organoleptic properties. “Slavonski med” is not subjected to intensive heat treatment. It can be decrystallized at a maximum temperature of 43 °C, which ensures that its properties derive from the specific flora on the defined area and thanks to the bees remain unchanged. Similarly, “Slavonski med” is jurs from the frame without heating, by the centrifuge process, must not be pasteurized in order to preserve the specified properties (Ministry of Agriculture, 2023). Each package placed on the market must be marked with the logo shown on Figure 1.



Figure 1 „Slavonski med“ label (Ministry of Agriculture, 2023)

The right to use the logo, under equal conditions, has all users of the mark that on market a product that conforms to the product specification. The logo is brown and black, bordered with Croatian braid, on the left side above the logo there is a bee. Inside the logo on the left side, there is a map of Croatia, and on the right side, there is the year 1879 with the old coat of arms of Slavonia. In the central place of the logo is located woven beehive. In the upper part of the logo, the name “Slavonski med”, while in the lower part of the logo there are three oak leaf

(Ministry of Agriculture, 2023).

Beekeepers in Slavonia continue the 130-year tradition of honey production. It usually is “retail” honey production to supplement family income in rural areas on family farms. During many years of beekeeping at in the region of Slavonia, knowledge about beekeeping was developed and transferred through practice, skills, abilities and knowledge of people. That knowledge would not be exactly that much if it was not human factors, beekeepers, who take care not only of bees, but also of the landscape where they are grazing takes place. The bees are autochthonous gray bees (*Apis mellifera carnica*), under the Pannonian type, species adapted to the climate and relief is another feature of the beekeeping sector in the defined area. With using

this EU label, beekeepers have opportunity to raise market share and honey price, so intention is to work on education and promotion of customers to understand this issue.

Conclusion

The paper gives a summary of the application of marketing in the honey market. As a guiding idea, the aspiration of Croatian honey suppliers to direct their efforts towards the market and satisfying the demand arising from it stands out. This can only be achieved through the application of coordinated marketing activities, which allways focus on consumers, towards whom they will direct all their efforts and resources, all with the aim of satisfying

their needs and making a profit. Marketing activities are not only the task of beekeepers, but also of beekeeping associations, trade, catering and state institutions. Honey suppliers should strive for the idea that marketing is not the art of selling honey, but knowing, based on information obtained from the market, what kind of honey to produce to meet the needs that arise on the market, using Slavonian honey label. Only with such an attitude, they will be able to successfully deal with the challenges of market competition in the future.

References


- Bogdanov, S., Lüllmann, C., Martin, P., Von Der Ohe, W., Russmann, H., Vorwohl, G., Vit, P. (1999): Honey quality and international regulatory standards: review by the International Honey Commission. *Bee world*, 80(2), 61-69. <https://doi.org/10.1080/0005772x.1999.11099428>
- Brščić, K., Šugar, T. Poljuha, D. (2017): An empirical examination of consumer preferences for honey in Croatia. *Applied Economics*, 49(58), 5877-5889. <https://doi.org/10.1080/00036846.2017.1352079>
- European Comission (2023). https://agriculture.ec.europa.eu/system/files/2022-04/market-presentation-honey_en_0.pdf [10.8.2023.]
- European Commission (2019). Register of protected designations of origin and protected geographical indications. Official Journal of the European Union. <https://ec.europa.eu/agriculture/eambrosia/geographical-indications-register/> [10.8.2023.]
- Kolega, A. (1994): Tržništvo poljodjelskih proizvoda, Nakladni zavod Globus, Zagreb, str. 147.
- Kraljić, K. (2002). Historical aspects of beekeeping in Croatia. *Bee World*, 83(3), 137-143.
- Matić, S. (2018). Health properties of Slavonian honey: From folklore to scientific evidence. *Croatian Medical Journal*, 59(4), 210-217.
- Meler, M. (2002). Marketing, Ekonomski fakultet u Osijeku, Osijek.
- Ministry of Agriculture (2023). https://poljoprivreda.gov.hr/UserDocsImages/arhiva/datastore/filestore/86/Izmijenjena_Specifikacija_proizvoda-Slavonski_med_.pdf [17.8.2023.]
- Ramanathan, H. N., Chacko, P. S., Andrljic, B. (2022): Global Diffusion of Innovation: An Empirical Comparison. *WSEAS Transactions on Business and Economics*, 19, 349-360. <https://doi.org/10.37394/23207.2022.19.31>
- Rozykulyyeva, L., Isnaeni, I., Saroh, S. M., Astuti, S. D. (2023): Antibacterial activity of Turkmenistan Mei Honey against *Staphylococcus aureus* and *Escherichia coli* in comparison with Indonesian wild forest honey. In AIP Conference Proceedings (Vol. 2858, No. 1). AIP Publishing. <https://doi.org/10.1063/5.0162488>

Šedík, P., Horska, E., Skowron-Grabowska, B., Illés, C. B. (2018): Generation marketing in strategic marketing management: case study of honey market. Polish Journal of Management Studies, 18(1), 326-337. <https://doi.org/10.17512/pjms.2018.18.1.24>

Wu, S., Fooks, J. R., Messer, K. D., Delaney, D. (2015): Consumer demand for local honey. Applied Economics, 47(41), 4377-4394. <https://doi.org/10.1080/00036846.2015.1030564>

MARKETINŠKI ASPEKTI STANDARDIZACIJE KVALITETE PROIZVODA NA TRŽIŠTU MEDA

 Berislav Andrić¹, Ekiz Erdogan², Emiliano Gallaga³

 ¹ Sveučilište J. J. Strossmayera u Osijeku, Fakultet za turizam i ruralni razvoj Požega, Vukovarska 17, 34000 Požega, Hrvatska

² Fakultet hotelskog menadžmenta i turizma, Central Asian University, 264, Milliy bog street, Barkamol MFY, Distrikt Mirzo Ulugbek, 111221 Taškent, Uzbekistan

³ Universidad de Ciencias y Artes de Chiapas, Av 1a. Sur Pte No. 1460, Col. Centro, Caleras Maciel, 29014 Tuxtla Gutiérrez, Meksiko

 bandrlic@ftrr.hr

pregledni rad

Sažetak

Koliko god je med, osim za prirodnu potrošnju, namijenjen tržištu, hrvatski ponuditelji svoje napore moraju usmjeriti prema zahtjevima tržišta. Cilj marketinga je poznavati i razumjeti kupca toliko dobro da mu proizvod odgovara i da se sam prodaje. U idealnom slučaju, marketing bi trebao rezultirati kupcem koji je spreman kupiti. Koncept marketinga počiva na četiri stupa: ciljno tržište, potrebe kupaca, integrirani marketing i profitabilnost. Marketinške aktivnosti nisu misija samo pčelara. Pčelarske udruge, trgovci, ugostiteljstvo i država također moraju dati uvid u marketing. Hipoteza ovog rada je da bi hrvatski pčelari trebali koristiti istraživanje tržišta kako bi vidjeli koji proizvod kupci žele. Moraju koristiti upravljanje marketingom, što je proces planiranja i izvršenja koncepcije, određivanja cijena, promocije i distribucije meda i drugih pčelinjih proizvoda za stvaranje razmjene koja zadovoljava individualne i organizacijske profitabilne ciljeve. Na kraju, na konkurentnom tržištu EU bilo bi korisno koristiti naziv „Slavonski med“, pa su dane ideje kako to uvesti na tržište.

Ključne riječi: med, marketing, standardizacija