

INSTITUT ZA EKONOMIKU POLJOPRIVREDE-BEOGRAD

Prof. dr Mirjana Savić
Dr Vesna Popović

SVOJSTVA, PROIZVODNJA I PROMET ZAČINA



BEOGRAD, 2008.

**INSTITUT ZA EKONOMIKU POLJOPRIVREDE
BEOGRAD**

Prof. dr Mirjana Savić
Dr Vesna Popović

**SVOJSTVA, PROIZVODNJA I PROMET
ZAČINA**

Monografija

BEOGRAD, 2008.

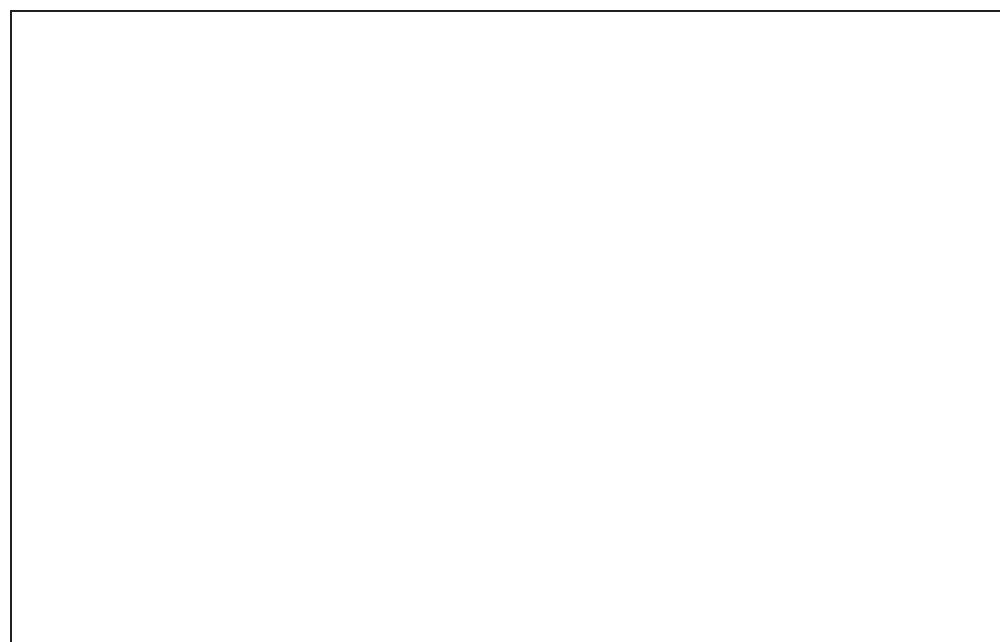
Izdavač
Institut za ekonomiku poljoprivrede, Beograd

Za izdavača
Prof. Dr Drago Cvijanović, direktor

Recenzenti
Dr Danilo Tomić
Prof. dr Veljko Radojević

Tiraž
300 primeraka

Štampa
DIS Public d.o.o. Beograd



Štampanje monografije je u celini finansirano od strane Ministarstva za
nauku i tehnološki razvoj Republike Srbije

SADRŽAJ

	Strana
PREDGOVOR	1
I UVOD	2
II VRSTE I SVOJSTVA ZAČINA.....	4
Anis.....	5
Beli luk	7
Biber	10
Bosiljak	13
Celer	15
Cimet.....	18
Crveni luk	21
Čili	25
Čubar	28
Đumbir.....	31
Estragon.....	33
Idirot	36
Isiot.....	38
Kapar	40
Karanfilić	42
Kardamom.....	44
Kim	47
Kleka	50
Korijander	52
Kumin	55
Kurkuma	58
Lavanda	60
Lovor	62
Majkina dušica.....	64
Majoran	67
Mirodija	70
Morač	74
Muskatni orašćić	77
Nana	80
Origano	83

Paprika.....	86
Paštrnjak	89
Peršun	92
Pimet	95
Ren	98
Ruzmarin	100
Selen	104
Slačica bela	106
Susam	108
Šafran.....	111
Timijan.....	113
Vanila	117
Žalfija.....	120

III PROIZVODNJA I PROMET ZAČINA

<i>Proizvodnja i promet začina u svetu</i>	124
<i>Put začina.....</i>	124
<i>Proizvodnja začina u svetu</i>	125
<i>Proizvodnja začina u EU-27.....</i>	131
<i>Trgovina začinima u svetu.....</i>	134
<i>Trgovina začinima u EU-27.....</i>	140
<i>Proizvodnja i promet začina u Srbiji</i>	147
<i>Proizvodnja i tržište začina u Srbiji.....</i>	147
<i>Gajenje i sakupljanje začinskog bilja.....</i>	156
<i>Interesno udruživanje i podrška države i fondova</i>	167
<i>Spoljnotrgovinska razmena začina Srbije.....</i>	171
<i>Obim i regionalna struktura izvoza i uvoza začina</i>	171
<i>Spoljnotrgovinska regulativa.....</i>	180

IV ANALIZA HEMIJSKOG SASTAVA ZAČINA184

V ZAKLJUČNA RAZMATRANJA188

VI LITERATURNI IZVORI.....191

VII PRILOG.....207

Tabela 1-Prikaz lekovitog delovanja začina.....207

Tabela 2-Koncentracija i kvantitativno dominantna komponenta etričnog ulja začina	211
Tabela 3-Pregled kompatibilnosti povrća i začina	212
Strukturne formule pojedinih komponenti eteričnih ulja	214
Registar narodnih naziva začina	217
Registar latinskih naziva začina	218

PREDGOVOR

U svetu je sve izraženiji trend povratka prirodi, prirodnoj ishrani, lečenju prirodnim sredstvima. Preduslov za zdrav život je, pre svega, zdrava ishrana, ali i primena, posebno u preventivne svrhe, lekovitog i začinskog bilja.

U vreme kada se, sa oporavkom privrede i rastom dohotka, domaće tržište vraća pravim vrednostima u ishrani, a profit na stranom tržištu pripada onima koji su u stanju da ponude visoko kvalitetne i ekološki zdrave proizvode, povećava se potreba za istraživanjima na unapređenju proizvodnje i potrošnje jedne od takvih grupa proizvoda, a to su začini.

Otvaranje Srbije prema svetu početkom 2000-tih i prateće menjanje stila života, može se, pored ostalog, sagledati i na tržištu začina, koje u Srbiji, prema procenama vodećih proizvođača i uvoznika, u proteklih nekoliko godina beleži rast po stopi od 45 odsto godišnje.

Jedna od prepreka povećanju prodaje i asortimana začina u trgovini je nepoznavanje šire palete začina, njihovih osnovnih svojstava i načina upotrebe. Ova monografija, pored naučnih rezultata, interesantnih za užu naučnu i stručnu javnost, upravo nudi i odgovore na pitanja te vrste.

Pored botaničkih, morfoloških, hemijskih, lekovitih i nutritivnih svojstava, odgovarajuća pažnja posvećena je i pitanjima iz oblasti organizacije proizvodnje i spoljnotrgovinskog prometa začina.

Domaća proizvodnja začina ima rastući trend i njome se bavi sve veći broj privrednih subjekata, u značajnoj meri zadovoljava domaće potrebe, a u spoljnotrgovinskoj razmeni ostvaruje suficit trgovinskog bilansa. Bez obzira na rezultate koje ova delatnost ostvaruje u sektoru agroindustrije, mnogi potencijali proizvodnje, odnosno prerade i izvoza začina nisu iskorišćeni.

Ne treba izgubiti iz vida ni sirovinski aspekt, tj. mogućnosti sakupljanja i gajenja začinskog bilja, posebno na principima organske poljoprivrede, i ulogu ovih delatnosti u razvoju sitnih, multifunkcionalnih gazdinstava, smanjenju ruralnog siromaštva i povećavanju zaposlenosti u ruralnim i periurbanim područjima zemlje, čemu je, takođe, posvećena odgovarajuća pažnja.

Monografija svojim sveobuhvatnim analizama ima za cilj da ukaže na potencijale ovog, po obimu proizvodnje i razmene malog, ali po proizvodnim i trgovinskim efektima i mogućnostima daljeg razvoja, dinamičnog sektora agrobiznisa, i ohrabri sve aktere na dalja zalaganja na unapređenju lanca proizvodnje, prometa i potrošnje začinskog bilja i začina i tako doprinese razvoju multifunkcionalne poljoprivrede i preduzetništva u agrobiznisu Srbije.

Autori

I UVOD

Trgovina začinima tokom poslednjih hiljadu godina, znatno je uticala na osnovne tokove razvoja civilizacije. Začini su, pored zlata i svile, bili predmet trgovine između Istoka i Zapada. Uticali su na otkriće prekomorske plovidbe. Bili su uzrok uspona i padova kraljevstava, dominacije svetskom trgovinom Španaca i Portugalaca, zatim Holanđana i Engleza. Većina začina, koji se i dalje u svetu upotrebljavaju, osim onih egzotičnih sa Orjenta, Kine i Indije, poreklom su iz Evrope, najčešće iz područja Mediterana i iz jugoistočnih delova kontinenta.

Začini su u srednjem, ali i početkom novog veka imali značajnu ekonomsku i političku ulogu kao danas nafta. Trgovina začinima, a naročito onim iz Azije, je bila vrlo unosan posao; doprinela je velikom bogatstvu prvo arapskih država, a zatim i talijanskih gradova-država i kolonijalnih sila.

Začini su u prošlim vremenima bili privilegija bogatih. Vremenom je začinsko bilje postalo dostupno i ostalom stanovništvu, da bi neke vrste postale ključni simboli pojedinih nacionalnih kuhinja.

Tržište začina u Srbiji bilo je, doskora, prilično siromašno i nerazvijeno, ali sada je već došlo vreme kada potrošači izričito traže kvalitetne proizvode; postali su veoma izbirljivi po pitanju vrste i kvaliteta začina, koje svakodnevno koriste za pripremu jela.

Širi assortiman začina na ovdašnje tržište među prvima su donele velike inostrane trgovinske kuće.

Prodaja začina raste uporedo sa porastom standarda. Očekivano, najbolje tržište je beogradsko, a zatim tržište Vojvodine, gradovi u centralnoj Srbiji. U poređenju sa susedima, potrošnja začina je, ipak, znatno manja. Dok je godišnja vrednost prometa začina strane kompanije Kotanji u Srbiji oko pola miliona evra, u Sloveniji je taj iznos dvostruko, a u Hrvatskoj tri puta veći.

* * *

Najveći broj začina su proizvodi biljnog porekla, karakterističnog mirisa i ukusa ili boje. Dodaju se prehrabrenim proizvodima i alkoholnim i bezalkoholnim pićima radi postizanja odgovarajućeg mirisa, ukusa, boje ili radi svarljivosti, kozmetičkim preparatima i parfemima radi karakterističnog mirisa, a lekovitim preparatima zbog njihovih aktivnih principa.

Kao začini se koriste aromatični delovi začinskih biljaka i to: koren, kora, list, cvetni pupoljak, cvet, tučak, plod, seme. Neki začini se koriste u

prirodnom obliku, dok se drugi pripremaju sušenjem, sitnjenjem, pretvaranjem u prah i ekstrahovanjem aromatičnih sastojaka.

U potrošnji značajno mesto zauzimaju mleveni začini.

Česta je primena i ekstrahovanih začina. Izdvojeni aromatični sastojci mešaju se sa nosačem (saharoza, glukoza, natrijum-glutaminat i dr) u odnosu, koji je identičan njihovoj koncentraciji u začinskoj biljci.

Hemijski sastav začina je veoma kompleksan, a svaki poseduje neki specifičan i dominantan sastojak.

Najznačajnije komponente hemijskog sastava začina pripadaju grupi isparljivih i čvrstih ulja, smola, estera, fenola, terpena, alkohola, organskih kiselina, alkaloida i jedinjenja sa sumporom. Kao redovni sastojci začina javljaju se i proteini, skrob, šećeri, bojene materije i veliki broj drugih organskih jedinjenja.

Specifična aroma začina potiče od eteričnih ulja, a oštar i ljut ukus od alkaloida i glukozida i podukata njihove hidrolize.

Kod raznih naroda različita je upotreba začina kvantitativno i kvalitativno. Ishrana pojedinih naroda ne može se ni zamisliti bez korišćenja mirišljavih i ljutih začina, dok je njihova upotreba kod drugih svedena na minimum.

VI LITERATURNI IZVORI

1. Amidžić L, S. Dražić, M. Kostić, S. Maksimović, R. Mandić, N. Menković, B. Panjković, V. Popov, D. Radanović, Dj. Roki, D. Sekulović, B. Stepanović, S. Tasić. (1999). *Strategija zaštite lekovitog bilja u Srbiji*. Ministarstvo zaštite životne sredine Republike Srbije;
2. Amr S, Đorđević, S, The investigation of the Quality of Sage (*Salvia officinalis* L) originating from Jordan, Working and Living Environmental Protection Vol. 1, No 5, 2000, pp. 103- 108;
3. Angioni A, Barra A, Russo MT, Coroneo V, Dessi S, Cabras P, Chemical composition of the essential oils of Juniperusfrom ripe and unripe berries and leaves and their antimicrobial activity , J Agric Food Chem. 2003 May 7;51 (10):3073-8;
4. Antonious GF, Kochhar TS. , Zingiberene and curcumene in wild tomato. ,J Environ Sci Health B. 2003 Jul;38(4):489-500;
5. D'Auria, F. D., Tecca, M., Strippoli, V., Salvatore, G., Battinelli, L., Mazzanti, G, English Title: Antifungal activity of *Lavandula angustifolia* essential oil against *Candida albicans* yeast and mycelial form, Medical Mycology, 2005 (Vol. 43) (No. 5) 391-396;
6. Asllani, Uran, Toska, Vilma, Chemical composition of Albanian thyme oil (*Thymus vulgaris* L.), Journal of Essential Oil Research: JEOR, May/Jun 2003;
7. Atti-Santos Ana Cristina, Marcelo Rossato, Gabriel Fernandes Pauletti, Luciana Duarte Rota, Juarez Ciro Rech, Marcia Regina Pansera, Fabiana Agostini, Luciana Atti Serafini1 and Patrick Moyna, Physico-chemical Evaluation of *Rosmarinus officinalis* L.2005.Essential Oils, Brazilian Archuves of Biology and technology, 2005;
8. Azu N. Z, M.Sc, Antimicrobial Properties Of Extracts Of Allium cepa (Onions) And Zingiber officinale (Ginger) On Escherichia coli, Salmonella typhi And Bacillus subtilis The Internet Journal of Tropical Medicine. 2007. Volume 3 Number 2;
9. B92. USAID: 39 mil.\$ za privredu Srbije 22. decembar 2007, http://www.b92.net/biz/vesti/srbija.php?yyyy=2007&mm=12&dd=22 &nav_id=277645;
10. Baatout S, Derradji H, Jacquet P, Ooms DMichaux A, Mergeay M, Effect of curcuma on radiation-induced apoptosis in human cancer cells, Int J Oncol. 2004 Feb;24(2):321-9;
11. Bahkali A. H., Hussain M. A. Basahz A.Z., Protein and oil composition of sesame seeds (*Sesamum indicum*, L.) grown in the Gizan area of Saudi Arabia, International journal of food sciences and nutrition , 1998, vol. 49, n°6, pp. 409-414;
12. Banerjee M, L. M. Tripathi, V. M. L. Srivastava, Anju Puri, Rakesh Shukla, Modulation Of Inflammatory Mediators By Ibuprofen And Curcumin Treatment During Chronic Inflammation In Rat Immunopharmacology and Immunotoxikology, Volume , Issue 2, January 2005, 213 – 224;
13. Baser, K H C, Özek, T, Kirimer, N, Tümen, G, A Comparative Study of the Essential Oils of Wild and Cultivated Satureja hortensis L, Journal of Essential Oil Research: JEOR, Sep/Oct 2004;

14. Bernstein JE, Parish LC, Rapaport M, et al. Effects of topically applied capsaicin on moderate and severe psoriasis vulgaris. *J Am Acad Dermatol* 1986;15:504–7;
15. Bogdan A. Slominski , Heather D. Kienzle , Ping Jiang , Lloyd D. Campbell, Pickard M. and Rakow G, Chemical composition and nutritive value of canola Quality Sinapsis alba mustard, (www.region.org.au);
16. Bogavac, P, Savić Mirjana, Svilar Nada, Fitoterapija - istina i zabluda, Saopšteno na IX Savetovanju agronoma i tehnologa, Zbornik radova, Smederevo, 193 -196, 1995;
17. Bugno Adriana, Maria Aparecida Nicoletti, Adriana A. B. Almodóvar, Tatiana C. Pereira, Mariângela T. Auricchio, Antimicrobial efficacy of *Curcuma zedoaria* extract as assessed by linear regression compared with commercial mouthrinses, Brazilian Journal of Microbiology, vol. 38 no.3 São Paolo, July/ Sept. 2007;
18. Busatta C, Altemir Jos Mossi, Maria Regina Alves Rodrigues, Rogério Luis Cansian, José Vladimir de Oliveira , Evaluation of *Origanum vulgare* essential oil as antimicrobial agent in sausage, Brazilian Journal of Microbiology, vol.38 no.4, São Paulo Oct./Dec. 2007;
19. Butkienė Rita, Ona Nivinskienė,Danutė Mockutė,Chemical composition of unripe and ripe berry essential oils of *Juniperus communis* L. growing wild in Vilnius district, Chemija,2004.T.15.Nr.4 P. 5;
20. Capsaicin study group. Effect of treatment with capsaicin on daily activities of patients with painful diabetic neuropathy. *Diabet Care* 1992;15:159–65;
21. Chalchat, Jean-Claude, Petrovic, Silvana D, Maksimovic, Zoran A, Gorunovic, Momcilo S, Composition of Essential Oils of Some Wild Salvia Species Growing in Serbia, J of Ess Oil, 2004;
22. Charles, D.J. M.R. Morales, and J.E. Simon. 1993. Essential oil content and chemical composition of finocchio fennel. p. 570-573. In: J. Janick and J.E. Simon (eds.), New crops. Wiley, New York;
23. Checallier, A, Encyclopedia of Medicinal Plants Dorling Kindersley, London, 1996;
24. COMMISSION REGULATION (EC) No 1214/2007 of 20 September 2007 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff, www.eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:286:0001:0894:EN:PDF;
25. Connell M A O and S A Rushworth, Curcumin: potential for hepatic fibrosis therapy?, British Journal of Pharmacology (2008) 153, 403–405; doi:10.1038/sj.bjp.0707580; November 2007;
26. *Curcumin attenuates* diet-induced hypercholesterolemia in rats, Med Sci Monit, 2005 Jul;11(7):BR228-234. Epub 2005 Jun 29;
27. Cvijanović D., R. Bukvić, S. Lazarević, Vesna Popović, Vesna Simonović, Ana Vujošević. (2005). *Revitalizacija i unapređenje proizvodnje cveća*. Institut za ekonomiku poljoprivrede, Beograd, Šumarski fakultet, Beograd, Poljoprivredni fakultet, Beograd;
28. Čolić, M, Savić Mirjana, Garlic extracts stimulate proliferation of rat Lymohocytes in vitro by increasing IL-2 and IL-4 production, Imunopharm and Imunotoxicol, vol. 22, 1, 163-181, 2000;

29. Čolić, M, Vučević, D, Kilibarda, V, Radičević Nada, Savić Mirjana, Modulatory effects of garlic extracts on proliferation of T-lymphocytes in vitro stimulatesd wit concavalin A Phitomedicine, 9 (2), 117-224, 2002;
30. Dagne, E., Hailu, S., Bisrat, D. and Worku, T. (1998) , Constituents of the Essential Oil of Thymus schimperi *Bull. Chem. Soc. Ethiop.* , 12 : 79-82;
31. Dias, P. C., Foglio, M. A., Possenti, A., de Carvalho, J. E., Antiulcerogenic activity of crude hydroalcoholic extract of Rosmarinus officinalis L, *J-Ethnopharmacol.* 2000. Jan; 69(1): 57-62;
32. Dhingra,D, Sharma, A, Antidepressant-Like Activity of *n*-Hexane Extract of Nutmeg (*Myristica fragrans*) Seeds in Mice Journal of Medicinal Food. 2006, Vol. 9, No. 1: 84-89;
33. Dajić-Stevanović Zora, Berislava Ilić. (2005). Održivi razvoj prirodnih resursa lekovitog i aromatičnog bilja na području Srbije. Životna sredina ka Evropi, Environment for Europe,http://sewa.sewa-weather.com/~ambassadors/new_site/srp/images/stories/ Papers/ 03-03.pdf;
34. Dnevnik,10.03.2004,www.poljoprivreda.info/?p=vesti&od=2004-02-29&do=2004-03-13;
35. Dnevnik 27.07.2008, [www.naslovi.net/2008-07-27/dnevnik/pero-zbog-mosta-se-moglo-i-nagrabusiti/ 757617](http://www.naslovi.net/2008-07-27/dnevnik/pero-zbog-mosta-se-moglo-i-nagrabusiti/);
36. Donnelly, R, Helberg, U., u saradnji sa Flora and Fauna International i Dajić, Zora. (2003). Balkanska razvojna inicijativa za biljni sector – Faza 1: Konačni rezime izveštaja. Southeast Europe Enterprise Development (SEED) i Corporate Citizenship Facility (CCF), [www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/art_CCF-HDI Serbian/\\$FILE/HDI+Report+in+Serbian.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/art_CCF-HDI Serbian/$FILE/HDI+Report+in+Serbian.pdf);
37. Dražić S. (2004). Lekovite biljke Srbije. VIII Naučno-stručni simpozijum *Biotehnologija i agroindustrija* – povrće, krompir, ukrasne, aromatične i lekovite vrste. Velika Plana, 01-03. novembar, 2004. Institut za istraživanja u poljoprivredi SRBIJA Centar za povrtarstvo Smederevska Palanka. Zbornik radova;
38. Eidi Maryam , Akram Eidi and Hamidreza Zamanizade, Effect of *Salvia officinalis* L. leaves on serum glucose and insulin in healthy and streptozotocin-induced diabetic rats, *Journal of Ethnopharmacology* Vol 100, Issue 3, 14 September 2005, Pages 310-313;
39. Eikani H. M, Fereshteh Golmohammad , Soosan Rowshanzamir, Subcritical water extraction of essential oils from coriander seeds (*Coriandrum sativum* L.),(www.aseanfood.info);
40. Ehiabhi O.S., U.U. Edet1, T. M. Walker, J. M. Schmidt, W. N. Setzer,I.A. Ogunwande, E. Essien and O. Ekundayo, Electrophysiology and Behavioural Feedback of Diamondback moth, Volume 9 Number 2 (August 2006);
41. Ekonomist magazin. Začini - simbol promene načina života u Srbiji. 09. 12. 2006, www.ekapija.com/website/sr/page/82512;
42. El-Ghorab, A. H., Mansour, A. F., El-Massry, K. F., Effect of extraction methods on the chemical composition and antioxidant activity of Egyptian marjoram (*Majorana hortensis* Moench), *Flavour and Fragrance Journal*, 2004 (Vol. 19) (No. 1) 54-61
43. Ellison N, Loprinzi CL, Kugler J, et al. Phase III placebo-controlled trial of capsaicin cream in the management of surgical neuropathic pain in cancer patients. *J Clin Oncol* 1997;15:2974–80.

44. EunMi C, Hwang JaeKwan ,Antiinflammatory, analgesic and antioxidant activities of the fruit of *Foeniculum vulgare*, Fitoterapia, 2004 (Vol. 75) (No. 6) 557-565.
45. FAOSTAT, <http://faostat.fao.org/site/567/default.aspx>, jun 2008;
46. FAOSTAT, <http://faostat.fao.org/site/370/default.aspx>, jun 2008;
47. FAOSTAT, Classifications – ProdSTAT food commodities, <http://faostat.fao.org/site/384/default.aspx>, jun 2008;
48. FAOSTAT, <http://faostat.fao.org/site/342/default.aspx>, jun 2008;
49. FAOSTAT, <http://faostat.fao.org/site/535/default.aspx>, jun 2008;
50. Fellah, Souad, Diouf, Papa N, Petrisans, Mathieu, Perrin, Dominique, et al, Chemical Composition and Antioxidant Properties of *Salvia officinalis* L. Oil from Two Culture Sites in Tunisia, Journal of Essential Oil Research: JEOR, Sep/Oct 2006;
51. Feng J, Lipton J.M, Eugenol:antipyretic activity in rabbits, Neuropharmacology, 1987;26, 2003;
52. Ficker C, Smith ML, Akpagana K, Gbeassor M, Zhang J, Durst T, Assabgui R, Arnason JT, Bioassay-guided isolation and identification of antifungal compounds from ginger, *Phytother Res*, 2003.Sep;17(8):897-902;
53. Garg, S N, Naquvi, A A, Bansal, R P, Bahl, J R, Kumar, Sushil, Chemical Composition of the Essential Oil from the Leaves of *Curcuma zedoaria* Rosc. of Indian Origin, *Journal of Essential Oil Research: JEOR*, Jan/Feb 2005;
54. Garima Sancheti and P.K. Goyal, hylhydrazine-induced colon carcinogenesis , Toxicology and Applied Pharmacology, Volume 214, Issue 3, 1 August 2006, Pages 290-296;
55. Giselle P. Lim, Teresa Chu, Fusheng Yang, Walter Beech, Sally A. Frautschy, Greg M. Cole, The Curry Spice Curcumin Reduces Oxidative Damage and Amyloid Pathology in an Alzheimer Transgenic Mouse, *The Journal of Neuroscience*, November , 2001, 21(21):8370–8377;
56. Glišić Sandra, S. Milojević, Suzana I.Dimitrijević, A. M. Orlović, D. U. Skala, Antimicrobial activity of the essential oil and different fractions of *Juniperus communis* L. and a comparison with some commercial antibiotics, *J. Serb. Chem. Soc.* 72 (4), 2007, 311–320;
57. Gluščević S. (O)čaj bez kamilice i nane. *Dnevnik*, 06.03.2005, <http://82.117.206.29/Develop/vesti.nsf/feae540dc011162c1256e7d0032cb98/9b5ff54b4b0db868c1256fbc005a766d?Open Document>;
58. Grujić R, Čegar N, Marjanović Željka, Praktikum iz hemije, Šumarski fakultet, Univerzitet, Banja Luka;
59. Gohari A. Reza, Abbas Hadjiakhoondi, Abbas Shafi ee, Esmaeil Sadat Ebrahimi, Chemical Composition of the Essential Oils of *Satureja atropatana* and *Satureja mutica* Growing Wild in Iran, *Scientific Journal*, 2004;
60. Gülcün I, Münir Oktay, Ekrem K İreççi and Ö. I. Küffrev, Screening of antioxidant and antimicrobial activities of anise (*Pimpinella anisum* L.) seed extracts, *Food Chemistry*, Vol 83,November 2003, Pages 371-382;
61. Hakki, Alma, Ertos, M., Nitz, S., Kollmannsberger, H., Chemical composition and content of essencial Oil from the of cultivated turkish clove, *BioResources* 2 (2), 2007, 265-269;

62. Hosseinzadeh H, Younesi HM., Antinociceptive and anti-inflammatory effects of *Crocus sativus* L. stigma and petal extracts in mice, BMC Pharmacol, 2002. Mar;
63. Ikan R, Naturally Cancer Chemopreventive and Tumoricidal Properties of Saffron (*Crocus sativus* L.), *Experimental Biology and Medicine* 227:20-25 (2002).Occuring Glucoside, 1999, John Wiley, New York, 235;
64. Ikemoto T, Mimura K, Kitahara, T, 2003, Flavour Fragr. J, 45;
65. Jarikasem, S., S. Thubthimthed, K. Chawananoraseth, T. Suntorntanasat, Essebtial oils from three *Curcuma* species collected in Thailand 2005, *Acta Horticulturae* 677: III WOCMAP Congress on Medicinal and Aromatic Plants - Volume 3;
66. Jayaprakasha G. K., Jaganmohan Rao L. and Sakariah K. (1997), Chemical composition of the volatile oil from the fruits of *Cinnamomum zeylanicum* Blume. Flav. Fragr. J. 12, 331-333;
67. Jiang H, Zhengzhi Xie^a, Hyun Jo Koo, Steven P. McLaughlin^a, Barbara N. Timmermann^a and David R. Gang, Metabolic profiling and phylogenetic analysis of medicinal *Zingiber* species, *Phytochemistry*, Volume 67, Issue 15, August 2006, Pages 1673-1685;
68. Jirovetz L, Buchbauer G, Ngassoum MB, Geissler M, Aroma compound analysis of *Piper nigrum* and *Piper guineense* essential oils from Cameroon using solid-phase microextraction-gas chromatography, solid-phase microextraction-gas chromatography-mass spectrometry and olfactometry, *J Chromatogr A*, 2002. Nov. 8,976(1-2):265-75;
69. Jorge A, Chemical Composition of the Essential Oil of *Zingiber officinale* Roscoe L. from Cuba, *Journal of Essential Oil Research*, maj/jun 2004;
70. Lawless Julia, *The Illustrated Encyclopedia of Essential Oils* (Rockport, MA: Element Books, 1995), 233;
71. Lemhadri A, Mohamed Eddouks., Thierry Sulpice, Remy Burcelin, Anti-hyperglycaemic and Anti-obesity Effects of *Capparis spinosa* and *Chamaemelum nobile* Aqueous Extracts in HFD Mice, *American Journal of Pharmacology and Toxicology* 2(3): 106-110, 2007;
72. Lorendahl, B. (1996). New Cooperatives and Local Development: A Study of Six Cases in Jämtland, Sweden. *Journal of Rural Studies*, 12 (2);
73. Loziene, K, Venskutonis, P., Chemical Composition of the Essential Oil of *Thymus serpyllum* L. ssp. *serpyllum* Growing Wild in Lithuania, *Journal of Essential Oil Research: JEOR*, 2006;
74. Kamaleeswari M, Kumaraswami Deeptha, Murugan Sengottuvelan and Namasivayam Nalini, Effect of dietary caraway (*Carum carvi* L.) on aberrant crypt foci development, fecal steroids, and intestinal alkaline phosphatase activities in 1,2-dimet;
75. Katalog Hrana i piće, www.hranaipice.com;
76. Katić, B, Savić Mirjana, Mijajlović Nada, Regulativa očuvanja i unapređenja biološke i genetske raznovrsnosti, Tematski zbornik – Ekonomika poljoprivrede: "Multifunkcionalna poljoprivreda i ruralni razvoj I (razvoj lokalnih zajednica)", Institut za ekonomiku poljoprivrede, Beograd ,2006, str. 615-625;
77. Katić, B, Savić Mirjana, Mijajlović Nada, Mogućnost plasmana šumskih plodova, lekovitog i aromatičnog bilja, *Ekonomika poljoprivrede*, vol. LIII, br/No 3, 2006;

78. Katić B., Vesna Popović, Mirjana Savić. (2008). Korišćenje divlje flore I faune u Srbiji – mogućnosti i ograničenja. Međunarodni naučni skup Multifunkcionalna poljoprivreda I ruralni razvoj III – Ruralni razvoj i (ne)ograničeni resursi, Beograd, 4-5. decembar, 2008. Tematski zbornik. Knjiga druga, Institut za ekonomiku poljoprivrede, Beograd, str. 252-258;
79. Keivandokht, Samiee, Akhgar, Mohammad Reza, Rustaiyan, Abdolhossein, Masoudi, Shiv, Composition of the Volatiles of *Ferulago carduchorum* Boiss. et Hausskn. and *Levisticum officinale* Koch. Obtained by Hydrodistillation and Extraction, Journal of Essential Oil Research: JEOR, Jan/Feb 2006;
80. Khalid A. Kh, S.F. Hendawy and E. El-Gezawy, *Ocimum basilicum* L. Production under Organic Farming, Research Journal of Agriculture and Biologica Sciecnies 2(1): 25-32, 2006;
81. Knavel P, Handbook of herbs and spices, Vol. 2, 2004;
82. Kojuri J, Amir R Vosoughi, and Majid Akrami , Effects of anethum graveolens and garlic on lipid profile in hyperlipidemic patients, 6: 5. March 2007;
83. Kramer RE. J Am Oil Chem Soc. 1985;62:111;
84. Krešić Greta, Vesna Lelas and B. Šimunić, Effects of processing on nutritional composition and quality evaluation of candied celeriac, *Sadhana* Vol. 29, Part 1, February 2004, pp. 1–12;
85. Kumar Shahi , Suresh Chandra , Prabhu Dutt , Brij Lal Kaul , Aldo Tava, Pinarosa Avato, Essential oil composition of *Mentha x piperita* L. from different environments of north India, Flavour and Fragrance Journal, 14,1999, 5-8;
86. Kumar A, R.M. Samarth, S. Yasmeen, A. Sharma, T. Sugahara, T. Terado, H. Kimura, Anticancer and radioprotective potentials of *Mentha piperita*, BioFactors, Vol. 22, Numbe 1-4/2004, Pages 87-91;
87. Kurkcuoglu M, K. H. C.Baser, and M. Vural, Composition of the essencial oli of *Pastinaca sativa* L. Subs. urens (Reo. ex Gordon) celak,Chemistry of Natural Compounds, Vol. 42, No. 1;
88. Majeed and Prakash, L., The Medicinal Uses of Pepper, International Pepper News, Vol XXV, No. 1 Jan-Mar 2000, 23-31;
89. Mann J, Davidson S, Hobbs B, Banthorpe D.V., Harborne J.B, 1994, Natural Products:Their Chemistry and Biological Significance, Longman Group UK Limited,Harlow, 295;
90. Manuel Viuda-Martos, Yolanda Ruíz-Navajas, Juana Fernández-López*, José Angel Pérez-Álvarez, Chemical Composition of the Essential Oils Obtained From Some Spices Widely Used in Mediterranean Region, Acta Chim. Slov. 2007, 54, 921–926;
91. Marković V, Vračar Lj, Proizvodnja i prerad paprike, Feljton d.o.o., Novi Sad, 1998;
92. Marković Ivana, Živić D, Progressive magazin, maj, 2008, www.crier.co.yu;
93. Marongiu, Bruno, Piras, Alessandra, Porcedda, Silvia, Casu, Rita, Pierucci, Paola, Comparative Analysis of Supercritical CO₂ Extract and Oil of *Pimenta dioica* Leaves, Journal of Essential Oil Research: JEOR, Sep/Oct 2005;
94. Martins AP, Salgueiro L, Gonçalves MJ, da Cunha AP, Vila R, Cañigueral S, Mazzoni V, Tomi F, Casanova J, Essential oil composition and antimicrobial

- activity of three Zingiberaceae from S.Tomé e Príncipe, *Planta Med.* 2001 Aug;67(6):580-4;
95. Mastelić J and I. Jerković, Gas chromatography–mass spectrometry analysis of free and glycoconjugated aroma compounds of seasonally collected *Satureja montana* L., *Food Chemistry* Volume 80, Issue 1, January 2003, Pages 135-140;
 96. Marongiu B, Piras A, Porcedda S., Comparative analysis of the oil and supercritical CO₂ extract of *Elettaria cardamomum* (L.) Maton *J Agric Food Chem.* 2004. Oct 6;52(20):6278-82;
 97. Marvin J. Weil, Yanjun Zhang, and Muraleedharan G. Nair, Tumor Cell Proliferation and Cyclooxygenase Inhibitory Constituents in Horseradish (*Armoracia rusticana*) and Wasabi (*Wasabia japonica*), *J. Agric. Food Chem.*, 53 (5), 1440 - 1444, 2005;
 98. Marzouk, Mansour, Chraief, Mosrati, Cheriaa, Neffati, Marzouk, Sfari, Boukef, Barillies, Ghedira, Chemical composition, antibacterial and antimutagenic activities of four populations of *Rosmarinus officinalis* L. oils from Tunisia, Journal: Food, Agriculture & Environment (JFAE), Vol. 4, 2006;
 99. Masahiro Tanabe, Chen Yuh-Dan , Saito Ken-ichi , Kano Yoshihiro, Cholesterol Biosynthesis Inhibitory Component from *Zingiber officinale*, Vol. 41, N_o. 4, (1993) pp. 710-713;
 100. Matsuda Hisashi, Supinya Tewtrakul, Toshio Morikawa, Akihiko Nakamura and Masayuki Yoshikawa, Anti-allergic principles from Thai zedoary: structural requirements of curcuminoids for inhibition of degranulation and effect on the release of TNF- α and IL-4 in RBL-2H3 cells, *Bioorganic & Medicinal Chemistry* Volume 12, Issue 22, 15 November 2004, 5891-5898;
 101. Masuda Y, Kikuzaki H, Hisamoto M, Nakatani N, Antioxidant properties of gingerol related compounds from ginger, *Biofactors*. 2004;21(1-4):293-6;
 102. Matthäus B. and Band Musa Özcan, Glucosinolates and Fatty Acid, Sterol, and Tocopherol Composition of Seed Oils from *Capparis spinosa* Var. *spinosa* and *Capparis ovata* Desf. Var. *canescens* (Coss.) Heywood, *J. Agric. Food Chem.*, 53 (18), 7136 -7141, 2005;
 103. Mello, Marcia O., Amarel, Antônio F. C. and Melo, Murilo. Quantifying the micropagation of *Curcuma zedoaria* Roscoe. *Sci. agric.*, Oct./Dec. 2000, vol.57, no.4, p.703-707;
 104. Merlini, S., Enciclopedia degli alimenti, Calderini, Bologna, 1993;
 105. Mihajlović B., Kleka - ukras u dvorištu i lek u kući, Poljoprivreda, Internet magazin, maj, 2008;
 106. Miletić Nadežda, Savić Mirjana, Kvalitet prehrabnenih proizvoda u robnim rezervama, Saopšteno na Nučnom skupu poljoprivrednih inženjera, Neum, 1990, Zbornik radova, 22-26;
 107. Miletić P, Grujić R, Bojanić V, Marjanović-Balaban Željka, Topić Ž, 2004, Hemijazadaci i praktikum, Šumarski fakultet, Univerzitet, Banja Luka;
 108. Mills, H.A. and J.B. Jones. Plant analysis handbook II. MicroMacro Publishing, Inc. 1996;

109. Milovanović, B, Rajpreht, R, Savić Mirjana, Kvalitet ishrane Jugoslovena sa energetskog, nutritivnog i ekonomskog aspekta, Saopšteno na VIII Kongresu o ishrani, 1990, Beograd, Zbornik abstrakata, 9;
110. Mimica-Dukić Neda, Božin Biljana, Soković Marina, Mihajlović Biserka, Matavulj M, Antimicrobial and antioxidant activities of three *Mentha* species essenti, *Planta medica* 2003, vol. 69, n°5, pp. 413-419;
111. Ministarstvo poljoprivrede, šumarstva i vodoprivrede. Registr sorti poljoprivrednog bilja, http://www.sorte.minpolj.sr.gov.yu/upload/dl/Sortne_liste/rsprilogram.pdf;
112. Ministarstvo životne sredine i prostornog planiranja - Agencija za zaštitu životne sredine (2008). Izveštaj o stanju životne sredine u Republici Srbiji za 2007. godinu, http://www.sepa.sr.gov.yu/download/Izvestaj_2007_Web.pdf;
113. Ministarstvo poljoprivrede, šumarstva i vodoprivrede. (2008). Program raspodele i korišćenja sredstava subvencija u oblasti poljoprivrede, šumarstva i vodoprivrede za 2008. godinu;
114. Moreschi S. R. M., J. C. Leal, M. E. M. Braga, M. A. A. Meireles, Ginger and turmeric starches hydrolysis using subcritical water + CO₂: the effect of the SFE pre-treatment, *Brazilian Journal of Chemical Engineering*, vol.23 no.2 São Paulo Apr./June 2006;
115. Mujumdar AM, Dhuley JN, Deshmukh VK, Raman PH, Anti-inflammatory activity, of piperine, *Jpn J Med Sci Biol.* 1990 Jun;43(3):95-100;
116. Nakatani N., Phenolic antioxidants from herbs and spices, *Biofactors.* 2000;13(1-4):141-6;
117. Nesen Arslan, Bilal Gurbuz , Ercument Sarihan, , Ali Bayrak, Ahemet Gumuscu, Variation in Essential Oil Content and Composition in Turkish Anise(*Pimpinella anisum L.*) Populations, *Turk J Agric For.* 28, (2004), 173-177;
118. Newall C, et al. *Herbal Medicines:A Guide for Health-Care Professionals*, London, 1985;
119. Nikolić M. Marija, Vesna Popović. (2006). Zadruge kao inicijator razvoja lokalne zajednice u ruralnim područjima. *Ekonomika poljoprivrede*, br. TB/2006, str. 525-532;
120. Nguyen-Hoang Loc, Doan-Thi-Hong Diem, Doan-Huu-Nhat Binh, Dao-Thi Huong, Tae-Geum Kim and Moon-Sik Yang, Isolation and Characterization of Antioxidation Enzymes from Cells of Zedoary (*Curcuma zedoaria* Roscoe) Cultured in a 5-l Bioreactor, *Molecular Biotechnology*, Volume 38, Number 1 / January, 2008, 81-87;
121. Nirmala A, Padmakumari K.P, Jayalekshmy A,Essential oil composition of four major cultivars of black pepper (*Piper nigrum* L.) III, *Journal of Essential Oil Research:* JEOR, 2003
122. Noorbala AA, Akhondzadeh S, Tahmacebi-Pour N, Jamshidi AH, Hydro-alcoholic extract of *Crocus sativus* L. versus fluoxetine in the treatment of mild to moderate depression, *J Ethnopharmacol.* 2005 Feb 28;97(2):281-4;
123. Nusier K. M, Hameed N. Bataineh and Haytham M. Daradkah, Adverse Effects of Rosemary (*Rosmarinus officinalis* L.) on Reproductive Function in Adult Male Rats, *Experimental Biology and Medicine* 232:809-813 (2007);

124. Olaleye M.T, Afolabi C. Akinmoladun, A.A.Akindahunsi, Antioxidant properties of *Myristica fragrans* (Houtt) and its effect on selected organs of albino rats, African Journal of Biotechnology Vol. 5 (13), 1274-1278, 2006;
125. Ozbek H, M. Ozturk, A, Ozturk, E, Ceylan, Z. Yaner, Determination of Lethal Doses of Volatile and Fixed Oils of Several Plants, Eastern Journal of Medicine, 9 (1):04-06, 2004;
126. Panchal GM, Venkatakrishna-Bhatt H, Doctor RB, Vajpayee S., Pharmacology of *Acorus calamus* L. Indian J Exp Biol. 1989; 27(6): 561;
127. Panda H, Essential Oils Handbook, National Institute of Industrial Research, 2003,744;
128. Pérez-Silva A, E. Odoux, P. Brat, F. Ribeyre, G. Rodriguez-Jimenes, V. Robles-Olvera, M.A. García-Alvarado and Z. Günata, GC-MS and GC-olfactometry analysis of aroma compounds in a representative organic aroma extract from cured vanilla (*Vanilla lanifolia* G. Jackson) beans, Food Chemistry Volume 99, Issue 4, 2006, pages 728-735;
129. Politeo Olivera , Mila Jukić, and Mladen Miloš, Chemical Composition and Compared to Its Essential Oil, Croatica chemical Acta, 80 (1), 121-126, 2007;
130. Politika, [http://www.vibilia.co.yu/srpski/izvestaj/0507/lekovito-bilje_ polmag 430_291205.pdf](http://www.vibilia.co.yu/srpski/izvestaj/0507/lekovito-bilje_polmag_430_291205.pdf);
131. Popović Vesna. Evropska agrarna podrška i održivi ruralni razvoj. Urednik: dr Rajko Bukvić, recenzenti: prof. dr Zorka Zakić, dr Srboljub P. Ivanović, Institut za ekonomiku poljoprivrede, Beograd, 2003;
132. Popović Vesna, B. Katić, J. Subić. Očuvanje ruralnih vrednosti u funkciji povećanja zaposlenosti žena i omladine u planinskim područjima Srbije. Međunarodni naučni skup *Multifunkcionalna poljoprivreda i ruralni razvoj II – očuvanje ruralnih vrednosti.* Tematski zbornik – Druga knjiga. Institut za ekonomiku poljoprivrede, Beograd;
133. Popović Vesna, M. Milovanović, D. Tomić. "Podrška poljoprivredi i ruralnom razvoju u funkciji smanjenja siromaštva u Srbiji". *Ekonomika poljoprivrede*, br. 1/2008, str. 69-82;
134. Progressive Magazine Newsletter, 11, Jun, 2008. [www.progressivenewsletter.com/i ndex.jsp#](http://www.progressivenewsletter.com/index.jsp#);
135. Purkayastha, Jubilee, Nath, Subhan C, Klinkby, Naja, Essential Oil of the Rhizome of *Curcuma zedoaria* (Christm.) Rosc. Native to Northeast India, Journal of Essential Oil Research Mar/Apr 2006;
136. Raina K. V, S. K. Srivastava , K. V. Syamasunder , Essential oil composition of *Acorus calamus* L. from the lower region of the Himalayas, Flavour and Fragrance Journal, 2006,Volume 18, Issue 1 , Pages 18 – 20;
137. Ramesh, B, R. Saravanan, K.V. Pugalendi, Influence of Sesame Oil on Blood Glucose, Lipid Peroxidation, and Antioxidant Status in Streptozotocin Diabetic Rats Journal of Medicinal Food, 2005; 8(3): 377-381;
138. Republički zavod za statistiku, 2008. Statistika spoljne trgovine 2004-2007. Interna dokumentacija;
139. RPK Užice. (2008). Poljoprivreda Užičkog regiona, Poslovni vodič, <http://www.rpk-uzice.co.rs/sr/poljoprivreda/pur.pdf>;

140. Reza, M., Rustaiyan, Abdolhossein, Masoudi, Shiva, Composition of the Volatiles of *Ferulago carduchorum* Boiss. et Hausskn. and *Levisticum officinale* Koch. Obtained by Hydrodistillation and Extraction, Journal of Essential Oil Research: JEOR, Jan/Feb 2006;
141. Reza M, Abbas H, The Essential Oil Composition of *levisticum officinalis* from Iran, Asian Journal of Biochemistry 2 (2): 161-163, 2007;
142. Ribnicky D. M., A. Poulev, M. Watford, Antihyperglycemic activity of Tarralin™, an ethanolic extract of *Artemisia dracunculus* L, Phytomedicine, Volume 13, Issue 8, September 2006, Pages 550-557;
143. Ristić Gordana, Jorga, V, Savić Mirjana, Uticaj koktela jabuka-celer na nivo hidriranosti i izdržljivosti organizma sportista u toku treninga, Journal of agricultural sciences, 2000, vol.45, No 2, 131-137;
144. Rohdich F, Hecht, S, Bacher A, Eisenreich W, 2003,Pure Appl. Chem. 75, 393;
145. Romeo Vincenza, Marisa Ziino, Daniele Giuffrida, Cettina Condurso and Antonella Verzera, Flavour profile of capers (*Capparis spinosa* L.) from the Eolian Archipelago by HS-SPME/GC-MS , Food Chemistry, 2007, Volume 101, 3, 1272-1278;
146. Saetung A, Arunporn Itharat, Chawaboon Dechsukum, Chatchai Wattanapiromsakul, Niwat Keawpradub, and Pranee Ratanasawan, Cytotoxic activity of Thai medicinal plants for cancer treatment, J. Sci. Technol., 2005, 27(Suppl. 2) : 469-478;
147. Samarth R.M, Meenakshi Panwar, Ashok Kumar , Modulatory effects of *Mentha piperita* on lung tumor incidence, genotoxicity, and oxidative stress in benzo[a]pyrene-treated Swiss albino mice[retracted article, Environmental and Molecular Mutagenesis,2005, Volume 47, Issue 3 , Pages 192 – 198;
148. Santoyo S, Cavero S, Jaime L, et al. Chemical composition and antimicrobial activity of *Rosmarinus officinalis* L. essential oil obtained via supercritical fluid extraction. *J.Food Prot.*2005;68:790–5;
149. Scavroni1 J, Carmen Sílvia Fernandes Boaro1*, Márcia Ortiz Mayo Marques2 and Leonardo Cesar Ferreira1, Yield and composition of the essential oil of *Mentha piperita* L. (Lamiaceae) grown with biosolid, Research article, 2004;
150. Shams-Ghahfarokhi M, Reza M, Nasrin Amirrajab, Behnaz Moghadasi, Ghajari A, Zeini F, Sadeghi G. and Mehdi Razzaghi-Abyaneh, In vitro antifungal activities of *Allium cepa*, *Allium sativum* and ketoconazole against some pathogenic yeasts and dermatophytes, Fitoterapia, Volume 77, Issue 4, June 2006, Pages 321-323;
151. Shukla H.S. and S. C. Tripathi, Antifungal Substance in the Essential Oil of Anise (*Pimpinella anisum* L.), Agricultural and Biological Chemistry Vol.51 , No.7(1987)pp.1991-1993;
152. Sartoratto A, Ana Lúcia M. Machado, Camila Delarmelina, Glyn Mara Figueira, Marta Cristina T. Duarte; Vera Lúcia G. Rehder , Composition and antimicrobial activity of essential oils from aromatic plants used in Brazil, Braz. J. Microbiol. vol.35 no.4 São Paulo, 2004;
153. Savić Mirjana, Jovičić Jelena, Vranić Danijela. Enrichment of apple juice mineral content by adding celery juice, XXV International Horticultural Congress (IHC), Bruseles 354., 1998;
154. Savić Mirjana, Jovičić Jelena, Vranić Danijela, Nutritional value of coctail of celery and apple juice concerning its mineral content, VIII European nutrition conference, 1999, Lillehammer, Norway, Scandinavian journal of nutrition, 34, 411;

155. Savić Mirjana, Izvori i delotvornost vitamina, Monografija, Institut za ekonomiku poljoprivrede, Beograd, 2007;
156. Savić Mirjana, Antocijani, Margo, Sarajevo, 1992;
157. Savić Mirjana, Đokić Slavica. Praktikum iz tehnologije voća i povrća i bezalkolnih pića, Margo, Sarajevo, 1988;
158. Savić Mirjana, Obratov Dragica, Brajanoski Dušanka, Tinktura majčine dušice sa Stare planine, III Symposium with International Participation "Innovations in Crop and Vegetable Production", Zbornik izvoda, Poljoprivredni fakultet, Zemun, 2007, 67;
159. Savić Mirjana, Đokić Slavica. Sadržaj ukupnih i rastvorljivih mineralnih materija u povrću, Hrana i ishrana, 205-209, Beograd, 1986;
160. Savić Mirjana. Kontrola kvaliteta proizvoda od voća i povrća i bezalkoholnih pića, Potez, Beograd, 1993;
161. Savić Mirjana, Radičević Nada, Radičević Nada. Investigation on the inhibitory influence of Garlic preparation on selected test Microorganisms, Saopšteno na XXV International Horticultural Congres (IHC), Brussel, 1998, Roumanian Biotechnologicalletters an international journal, 1998, vol.3 No 3, 359- 366;
162. Savić Mirjana, Radičević Nada, Radičević Nada, Lekovita svojstva belog luka. XI Savetovanje agronoma i tehnologa, Aranđelovac, 1997. Zbornik radova, Vol.3. br.1, UDK 167.7.63, 149-153;
163. Savić Mirjana, Vranić Danijela, Jocić Svetlana, Čolić, M, Mineraln supstance belog luka, Hrana i ishrana, Vol. 38, 5-6, Beograd, 1997;
164. Savić Mirjana, Radičević Nada, Vranić Danijela, Comparative analysesof selenium in soil and in bulb of garlic, XXV International Horticultural congress, Brissel, 1998;
165. Savić Mirjana, Radičević Nada, Radičević Nada. Antibakterijska svojstva belog luka, Zbornik radova III jugoslovenskog simpozijuma prehrabnenih tehnologa, sveska 1, 18-22, Beograd, 1998;
166. Savić Mirjana, Katić B., Popović Vesna. Nutritivni, lekoviti i ekonomski aspekti začina, Industrija, UDK-33, YU ISSN 0350-0373, 4/2008, 119-132, 2008;
167. Savić, I, Danon, J. Začini u preradi mesa, Veterinarski fakultet, Beograd, 1982;
168. Scavroni Joseane, Carmen Sílvia Fernandes Boaro, Márcia Ortiz Mayo Marques, Cesar L, Rendimento e composição do óleo essencial de *Mentha piperita* L. (Lamiaceae) cultivada com bioisolado, Braz. J. Plant Physiol. vol.17 no. 4, Londrina Oct./Dec. 2005;
169. Sefidkon, F, Dabiri, M, Mirmostafa, S. A., Composition of Thymus serpyllum L. Oil, The Journal of Essential Oil Research: JEOR, May/Jun 2004;
170. Sharaf A,, I. A. Abdou and M. F. Saddik, Pharmaco-chemical studies on petroselinum Hortense (parsley), grown in Egypt, Plant Foods for Human Nutrition (Formerly Qualitas Plantarum), Volume 17, Number 4, 1969, 337-346;
171. Sharma A, Mathur R, Dixit VP, Prevention of hypercholesterolemia and atherosclerosis in rabbits after supplementation of Myristica fragrans seed extract, Indian J Physiol Pharmacol. 1995. 39(4) 407-10;
172. Shan E. B, Y. Yoshida, T. Sugiura and U. Yamashita, Stimulating activity of Chinese medicinal herbs on human lymphocytes in vitro, International Journal of Immunopharmacology, Volume 21, Issue 3, 1999, Pages 149-159;

173. Singh G, Om Prakash Singh, Y R Prasad, Chemical and biocidal investigations on rhizome volatile oil of Curcuma zedoaria Rosc., Indian Journal of Chemical Technology, Vol. 10, 2003, pp. 462-465;
174. Schulz H, R.Quilitzsch and H. Krüger, Rapid evaluation and quantitative analysis of thyme, origano and chamomile essential oils by ATR-IR and NIR spectroscopy, Journal of Molecular Structure Volumes 661-662, 16 December 2003, Pages 299-306;
175. Službeni glasnik RS, br. 50/1993. Uredba o zaštiti prirodnih retkosti;
176. Službeni glasnik RS, br.93/1993. Ispravka Uredbe o zaštiti prirodnih retkosti;
177. Službeni glasnik RS, br. 16/2000. Uredba o zaštiti Parka prirode Sićevačka klisura;
178. Službeni glasnik Republike Srbije, br. 4/2004. Pravilnik o kvalitetu začina, ekstrakata začina i mešavine začina;
179. Službeni glasnik RS, br. 31/2005, 45/2005 - ispr., 22/2007. Uredba o stavljanju pod kontrolu korišćenja i prometa divlje flore i faune;
180. Službeni glasnik RS, br. 62/2005, 61/2007. Zakon o Carinskoj tarifi;
181. Službeni glasnik RS, br. 60/2007. Naredba o zabrani sakupljanja pojedinih zaštićenih vrsta divlje flore i faune u 2007. godini;
182. Službeni glasnik RS, br. 112/2007 i 9/2008-ispr. Uredba o usklađivanju nomenklature Carinske tarife za 2008. godinu;
183. Službeni glasnik RS, br. 126/2007. Odluka o određivanju robe za čiji su izvoz, uvoz, odnosno tranzit propisani uslovi;
184. Službeni glasnik RS, br. 126/2007. Odluka o određivanju poljoprivrednih i prehrambenih proizvoda za koje se plaća posebna dažbina pri uvozu i iznosu posebne dažbine;
185. Službeni glasnik RS, br. 126/2007. Odluka o sezonskim carinskim stopama;
186. Službeni glasnik RS, br. 24/08. Konkurs za izdavanje dozvola za sakupljanje iz prirode zaštićenih vrsta divlje flore, faune i gljiva u 2008. godini;
187. Službeni glasnik RS, br. 29/08. Uredba o raspodeli i korišćenju podsticajnih sredstava za podršku razvoju sela kroz nabavku nove poljoprivredne opreme i mehanizacije, kao i za iskopavanje bunara u funkciji navodnjavanja u 2008. godini;
188. Službeni glasnik RS, broj 31/08. Uredba o uslovima i načinu korišćenja podsticajnih sredstava za unapređenje delatnosti i podršku interesnom udruživanju zemljoradničkih zadruga u 2008. godini;
189. Službeni glasnik RS, br. 38/2008. Uredba o izmenama i dopunama Uredbe o stavljanju pod kontrolu korišćenja i prometa divlje flore i faune;
190. Službeni glasnik RS, br. 52/2008. Naredba o zabrani sakupljanja pojedinih zaštićenih vrsta divlje flore i faune u 2008. godini;
191. Službeni glasnik RS – Međunarodni ugovori, br. 83/2008. Sporazum o stabilizaciji i pridruživanju (SSP) između evropskih zajednica i njihovih država članica i Republike Srbije i Prelazni sporazum o trgovini i trgovinskim pitanjima između evropskih zajednica i njihovih država članica i Republike Srbije;
192. Stefanini, M. B. ; Ming, L. C. ; Marques, M. O. M.; Meireles, M. A. A.; Moura, L. S. , Marchese, J. A., Seed productivity, yield and composition of the essential oil of fennel *Foeniculum vulgare* var. *dulcis* in the season of the year, Brazilian Journal of Medicinal Plants;

193. Sunita Pandey, Kewalanana, .Sobaran Singh and N.K.Sand, Site Specific Nutrient Management for Aswagandha (*Withania somnifera*) and European Dill (*Anethum graveolens*) in Subtropical belt of Uttarakhand (NWZ-India 66) (www.ppi-far.org);
194. Sayyah M, Afshin Peirovi and Mohammad Kamalinejad Anti-Nociceptive Effect of the Fruit Essential Oil of *Cuminum cyminum L.* in Rat, *Iranian Biomedical Journal* 6 (4): 141-145 October 2002;
195. Sayyah M, Leila Nadjafnia and Mohammad Kamalinejad, Anticonvulsant activity and chemical composition of *Artemisia dracunculus* L. essential oil, *Journal of Ethnopharmacology*, Volume 94, Issues 2-3;
196. Šmit Marija F. (2007). Napitak koji opušta i leči. *Progressive Magazin*, novembar, 2007, <http://www.crier.co.yu/www/media/U%20fokus%20caj.pdf>;
197. Šmit Marija F. (2008). Čarobni sastojak svakog jela, *Progressive Magazin*, april, 2008, <http://www.crier.co.yu/www/media/U%20fokus%20univerzalni%20zachini.pdf>;
198. Šomoš,A, The paprika, Akademija Kiado Budapest, 1984.Congress(IHC), Brusseles,1998, 178;
199. Uljarević, M, Savić Mirjana, Obezbeđenje kvaliteta prehrabnenih proizvoda, Radovi Poljoprivrednog fakulteta, Sarajevo, 1988, vol. XXXVI, 40, 195 – 201;
200. Uma Pradeep K, Geervani P, Eggum BO, Common Indian spices: nutrient composition, consumption and contribution to dietary value,_Plant Foods Hum Nutr.1993 Sep;44(2):137-48;
201. USDA National Nutrient Database for standard Reference, Release 16, 2003;
202. Tesoriere L, D. Butera, C. Gentile, and M. A. Livrea, Bioactive Components of Caper (*Capparis spinosa L.*) from Sicily and Antioxidant Effects in a Red Meat Simulated Gastric Digestion, *J. Agric. Food Chem.*, 55 (21), 8465–8471;
203. Todorović S. Tragovima akademika Tucakova - Skupocene gljive: beli tartufi. Politika, 22. 12. 2007, http://www.naslovi.net/2007-12-22/politika/tragovima-akademika-tucakova/527_458;
204. Tokusoglu, Ö., Ünal, M. K., Alakr, I, Proximate chemical composition, amino acid and fatty acid profiles of sesame seed flours, *Journal of Food Science and Technology (Mysore)*, 2004 (Vol. 41) (No. 4) 409-412;
205. Tomić Danilo, Vesna Popović, Mirjana Šuljmanac-Šećerov. (2007). "Održiva poljoprivreda – osnova ruralnog razvoja: evropska iskustva". *Ekonomika poljoprivrede*, Beograd, br. 1/2007;
206. Tripathi, A. K. V. Prajapati, N. Verma, J. R. Bahl, R. P. Bansal, S.P.S. Khanuja and S. Kumar, Bioactivities of the Leaf Essential Oil of *Curcuma Longa* (Var. Ch-66, J. Econ. Entomol. 95(1): 183-189, 2002;
207. Trombetta D, Francesco Occhiuto , Daniela Perri , Carmelo Puglia , Natale A. Santagati , Anna De Pasquale , Antonella Saija, Francesco Bonina , Antiallergic and antihistaminic effect of two extracts of two extracts of *Capparis spinosa L.* flowering buds, *Phytotherapy Research*, Mar 2005, Volume 19, 1, 29 – 33;
208. Tucakov, J, Lečenje lekovitim biljem, Rad, Beograd, 1990;
209. Vigo E, Cepeda A, Gualillo O, Perez-Fernandez R, In-vitro anti-inflammatory effect of *Eucalyptus globulus* and *Thymus vulgaris*: nitric oxide inhibition in J774A.1 murine macrophages, *J Pharm Pharmacol.* 2004 Feb;56(2):257-63;

210. Vodeničar Nadežda. (2004). Banke gena za očuvanje biodiverziteta. Ekonomist Magazin, br. 210. 31.maj, 2004, http://www.forum.mibor.rs/teme.asp?ZOPIC_ID=366;
211. Wikipedia. (2008). Put začina, http://hr.wikipedia.org/wiki/Put_za%C4%8Dina;
212. WHO Monographs Selected Medicinal www.who.int;
213. Wei K, Li W, Koike K, Pei Y, Chen Y, Nikaido T, New amide alkaloids from the roots of *Piper nigrum*, *J Nat Prod.* 2004 Jun;67(10):5-9;
214. Wei G, Fang YQ, Liu DH, Lin SF, Study on GC-MS fingerprint analysis in rhizome of volatile oil of *Acorus tatarinowii*, *Zhongguo Zhong Yao Za Zhi.* 2004 Aug;29(8):764-8;
215. Wilson B, G. Abraham, V.S. Manju, M. Mathew, B. Vimla, S. Sundaresan and B. Nambisan, Antimicrobial activity of *Curcuma zedoaria* and *Curcuma malabarica* tubers, *Journal of Ethnopharmacology*, Volume 99, Issue 1, 13 May 2005, Pages 147-151;
216. Windholz M, ed. The Merck Index. 10th ed. Rahway, NJ: Merck; 1983;
217. Vukalović Branka, Savić Mirjana, Toksične materije u hrani, Naučni skup poljoprivrednih inženjera, Neum, 1990, Zbornik radova, 26-31;
218. Zainab M. Al-Amin, Martha Thomson, Khaled K. Al-Qattan, Riitta Peltonen-Shalaby and Muslim Ali, Anti-diabetic and hypolipidaemic properties of ginger (*Zingiber officinale*) in streptozotocin-induced diabetic rats, *British Journal of Nutrition* (2006), 96:660-666;
219. Zangerl R. A, May R. Berenbaum, Genetic Variation in Primary Metabolites of *Pastinaca sativa*, *Journal of Chemical Ecology*, Vol. 30, N 10, 2004, 1985- 2002;
220. Zeggwagh, Naoufel Ali., Mohamed Eddouks., Jean Baptiste Michel, Thierry, Cardiovascular Effect of *Capparis spinosa* Aqueous Extract. Part III: Antihypertensive Effect in Spontaneously Hypertensive Rats, *American Journal of Pharmacology and Toxicology* 2(3): 111-115, 2007;
221. Zavod za zaštitu prirode. (2008). Količine divlje flore, faune i gljiva koje su sakupljene u 2008. godini. Izveštaj br. 02-1702/2 od 02.07. 2008. godine. Institut za ekonomiku poljoprivrede, interna dokumentacija;
222. Zeggwagh N-A., 2Sulpice and T. Eddous M, Anti-hyperglycaemic and Hypolipidemic Effects of *Ocimum basilicum* Aqueous Extract in Diabetic Rats, *American Journal of Pharmacology and Toxicology* 2(3): 123-129, 2007;
223. Yonzon, Minoba, Lee, Dong Jin, Yokochi, Toshihiro, Kawano, Yasuhiro, Nakahara, Toro, Antimicrobial Activities of Essential Oils of Nepal, *Journal of Essential Oil Research: JEOR*;
224. Yadegarinia D, Latif Gachkar, Mohammad Bagher Rezaei, Massoud Taghizadeh, Shakiba Alipoor Astaneh and Iraj Rasooli , Biochemical activities of Iranian *Mentha piperita* L. and *Myrtus communis* L. essential oils, *Phytochemistry*, Vol.67, 2006, Issue 12, Pages 1161-1298;
225. www.naturalhealthwizards.com;
226. www.botanical.com;
227. www.pubs.acs.org;
228. www.vitis.hr/;
229. www.florahealth.com;

230. www.uni-graz.at;
231. www.ekonoist.co.yu;
232. www.spice-trade.com;
233. www.sh.wikipedia.org;
234. www.botanical-online.com;
235. www.florahealth.com;
236. www.eria.ee;
237. www.topvita.info;
238. www.herbalpedia.com;
239. www.holisticonline.com;
240. www.chem.uwimona.edu.jm;
241. www.ppi-far.org;
242. www.regional.org.au;
243. www.florahealth.com;
244. www.ics.trieste.it;
245. www.naturlijkerwijs.com;
246. www.toildepices.com;
247. www.harvestfields.ca;
248. www.all-creatures.org;
249. www.iripz.pl/ftp;
250. www.adonis-sb.com;
251. www.agroekonomik.co.yu;
252. www.aleva.co.yu;
253. www.almi.at;
254. www.arhiva.glas-javnosti.co.yu/arhiva/2007/04/13/srpski/IS07041_203.shtml;
255. www.en.wikipedia.org/wiki/IUCN_Red_List;
256. www.biljeborca.co.yu;
257. www.centroproizvod.co.yu;
258. www.ekofarm.co.yu;
259. www.forum.mibor.rs;
260. www.geneza.co.yu;
261. www.herba.co.yu;
262. www.hranaipice.com;
263. www.kotanyi.com;
264. www.lay-gewuerze.de;
265. www.madeinserbia.co.yu;
266. www.melissa.co.yu;
267. www.neopak.co.yu;
268. www.novisadexpo.com;

269. www.nsfair.co.yu;
270. www.parlament.sr.gov.yu/content/lat/aktivnosti/skupstinske_detalji.asp?Id=1307 &t=A;
271. www.pks.komora.net/onama/StrukturaPKS/Udru%C5%Beenjakomore/Poljoprivredaprehrambenavodoprivreda/tabid/180/Default.aspx;
272. www.pks.komora.net/poljoprivreda/Poljoprivrednaproizvodnja/Lekovitoiaromaticnobilje/Proizvodnja/tabid/560/Default.aspx;
273. www.podravka.hr/kompanija/trzista/srbija;
274. www.omega-food-technology. co.yu;
275. www.polimark.co.yu;
276. www.raps.at;
277. www.raps.de/international/company.php;
278. www.reembraco.com;
279. www.serbia-montenegro.usaid.gov/code/navigate.php?Id=486;
280. www.sumadijskicvet.com;
281. www.telek-paprika.co.yu;
282. www.3mart.co.yu;
283. www.trzistesrbije.com;
284. www.vegeta.podravka.co.yu;
285. www.vesti.rs/izvor/Oduzeta-nelegalno-sakupljena-zalfija.html, 01.10. 2008;
286. www.vitamin.co.yu.