

ISBN. 978-979-8943-19-5



BIBLIOGRAFI HASIL PENELITIAN PERTANIAN KOMODITAS KAKAO



PUSAT PERPUSTAKAAN DAN PENYEBARAN TEKNOLOGI PERTANIAN
Badan Penelitian dan Pengembangan Pertanian
Departemen Pertanian
2009

Bibliografi

HASIL PENELITIAN PERTANIAN

KOMODITAS KAKAO

2004-2008

Pusat Perpustakaan dan Penyebaran Teknologi Pertanian
Badan Penelitian dan Pengembangan Pertanian
Departemen Pertanian
2009

**BIBLIOGRAFI
HASIL PENELITIAN PERTANIAN
KOMODITAS KAKAO**

2009

Diterbitkan oleh
PUSAT PERPUSTAKAAN DAN PENYEBARAN
TEKNOLOGI PERTANIAN
Jalan Ir. H. Juanda No 20 Bogor.
Telp. 0251 8321746, Faximili 0251 8326561
E-mail pustaka@pustaka-deptan.go.id
Homepage: //www.pustaka-deptan.go.id
ISBN. 978-979-8943-19-5

Pengarah

Dr. Gatot Irianto, M.Sc.

Penanggung jawab

Ir. Ning Pribadi, M.Sc.

Penyusun

Achmad Syaekhu, S.Sos

Widaningsih, S.S.

Setiawati

Sulistiyah

A. Djunaedi

Syarif Hidayat

Penyunting

Ir. Eka Kusmayadi, M.Hum

Ir. Heryati Suryantini

Hendrawaty, S.Sos

Suni Triani, S.Sos., M.Hum

Redaksi Pelaksana

Drs. Maksum, M.Si

Ayi Mugiaristi, A.Md.

KATA PENGANTAR

Bibliografi Hasil Penelitian Pertanian Komoditas Kakao 2004-2008 disusun dan disebarluaskan kepada para pengguna di lingkup Badan Litbang Pertanian, dimaksudkan agar perkembangan penelitian pertanian di berbagai negara dapat diketahui dan dipantau, sehingga dapat dijadikan rujukan untuk penelitian dan pengembangan pertanian di tanah air.

Bibliografi Hasil Penelitian Pertanian Komoditas Kakao 2004-2008 memuat bibliografi hasil penelitian yang bersumber dari Database Agris, Agricola, ProQuest, Science Direct, TEEAL, dan Tropag & Rural yang dilanggani oleh Pusat Perpustakaan dan Penyebaran Teknologi Pertanian (PUSTAKA).

Penyusunan bibliografi ini untuk memudahkan para pengguna, khususnya para peneliti Badan Litbang Pertanian dalam mencari informasi yang dibutuhkan, baik dalam rangka penyusunan proposal penelitian, penulisan ilmiah, laporan penelitian, maupun kegiatan penelitian dan kegiatan ilmiah lainnya.

Bibliografi Hasil Penelitian Pertanian Komoditas Kakao 2004-2008 selain diterbitkan dalam bentuk tercetak, dapat diakses melalui *off-line* dan *on-line* melalui web PUSTAKA www.pustaka.deptan.go.id. Untuk mendapatkan artikel lengkapnya, dapat ditelusuri melalui perpustakaan UK/UPT lingkup Badan Litbang Pertanian atau kontak langsung ke PUSTAKA melalui alamat: e-mail pustaka@pustaka-deptan.go.id atau telepon ke nomor 0251 8321746, fax 0251 8326561. Bagi para peneliti yang datang ke PUSTAKA, penelusuran dapat dilakukan di Operation Room Digital Library (ORDL) yang berada di Lantai 1 Gedung B.

Bibliografi Hasil Penelitian Pertanian Komoditas Kakao 2004-2008 ini diharapkan dapat digunakan oleh peneliti setiap waktu, sehingga mampu mempercepat dan mempermudah para peneliti dalam mencari informasi yang dibutuhkan.

Kepala Pusat,

Ir.Ning Pribadi, M.Sc.

DAFTAR ISI

KATA PENGANTAR	i
DAFTAR ISI	ii

KAKAO

2004

Agricola	1
Agris	3
ProQuest	3
Science Direct	4
TEEAL	6
Tropag & Rural	9

2005

Agricola	12
Agris	16
ProQuest	16
Science Direct	17
TEEAL	19
Tropag & Rural	22

2006

Agricola	25
ProQuest	29
Science Direct	30
Tropag & Rural	32

2007

Science Direct	34
Tropag & Rural	36

2008	
ProQuest	42
Science Direct	42
Indeks	46

BIBLIOGRAFI 2004

AGRICOLA

1. Activity of *Bacillus thuringiensis* toxins against cocoa pod borer larvae/ Santoso,D. ...[et.al.]
Pest management science 2004 Aug., v. 60, issue 8 p. 735-738.
Keywords:*Bacillus thuringiensis; Toxins; Cocoa pod borer; Larvae*

2. Biosynthesis, accumulation and degradation of theobromine in developing *Theobroma cacao* fruits/ Zheng,X.Q. ...[et.al.]
Journal of plant physiology 2004 Apr., v. 161, no. 4 p. 363-369.
Keywords:*Theobroma cacao; Fruits; Theobromine; Biosynthesis; Accumulation; Degradation*

3. Characterisation and genetic mapping of resistance and defence gene analogs in cocoa (*Theobroma cacao* L.)/Lanaud,C. ...[et.al.]
Molecular breeding new strategies in plant improvement. 2004 Apr., v. 13, no. 3 p. 211-227.
Keywords:*Cocoa; Theobroma cacao; Genetic mapping; Resistance; Gene analogs*

4. Creation of BAC genomic resources for cocoa (*Theobroma cacao* L.) for physical mapping of RGA containing BAC clones/Clement,D. ...[et.al.]
Theoretical and applied genetics 2004 May, v. 108, no. 8 p. 1627-1634.
Keywords:*Cocoa; Theobroma cacao; Physical mapping; Genomic resources*

5. Cryopreservation of cocoa (*Theobroma cacao* L.) somatic embryos for longterm germplasm storage/Fang, J.Y.; Wetten, A.; Hadley, P.
Plant science 2004 Mar., v. 166, issue 3 p. 669-675.
Keywords:*Cocoa; Theobroma cacao; Physical mapping; Genomic resources*

6. Detection and quantification of in vitroculture induced chimerism using simple sequence repeat (SSR) analysis in *Theobroma cacao* (L.)/Rodriguez Lopez, CM; Wetten, AC; Wilkinson, MJ
Theoretical and applied genetics 2004 Dec; 110(1): p. 157-166.
Keywords: ***Theobroma cacao*; In Vitro culture; Induced chimerism; Simple sequemente repeat**
7. Effect of cacao liquor extract on tumor marker enzymes during chemical hepatocarcinogenesis in rats/ Amin, I.; Koh, B.K.; Asmah
Journal of medicinal food. 2004 Spring, v. 7, no. 1 p. 712.
Keywords: **Cacao liquor extract; Tumor marker enzymes; Chemical hepatocarcius genesis**
8. Impact of removing diseased pods on cocoa black pod caused by Phytophthora megakarya and on cocoa production in Cameroon/ Ndoumbe Nkeng, M. ...[et.al.] *Crop protection.* 2004 May, v. 23, no. 5 p. 415 - 424.
Keywords: **Cocoa; Cocoa black pod; Phytophthora megakarya; Production; Cameroon**
9. New cacao linkage map based on codominant markers: development and integration of 201 new microsatellite markers/Pugh,T. ...[et.al.]
Theoretical and applied genetics. 2004 Apr., v. 108, no. 6 p. 1151-1161.
Keywords: **Cacao; Linked map; Microzatellite marker**
10. Selection of international molecular standards for DNA fingerprinting of *Theobroma cacao*/ Saunders, JA . ..[et.al.]
Theoretical and applied genetics 2004 Dec; 110(1): p. 41- 47.
Keywords:***Theobroma cacao*; DNA; Finger printing; International molecular standard**

AGRIS

11. Biological activity of confeconery industry by product cocoa shell/ Vitola, V; Strtnieks, A
Jelgava (Latvia). [LLU PTF]. 2004. p. 129-134.
Keywords: Cocoa shell; By product; Biological activity
12. Cacao meal in sheep feeding / Pires, A.J.V. ...[et.al.]
Revista Ceres (Brazil). (Jan-Feb 2004). v. 51(293) p. 33 - 43.
Keywords: Cacao; Meal; Sheep; Feeding
13. Characterization and genetic diversity of Phytophthora spp. tilates from cacao based on RAPD markers / Faleiro,-F.G. ...[et.al.]
Fitopatologia Brasileira (Brazil). (May-Jun 2004). v. 29(3) p. 303 - 306.
Keywords: Cacao; Genetic diversity; Phytopahthora spp; RAPD markers
14. Feeding preferences of Sahlbergella singularis Hagl. (Hemiptera Miridae) to me cocoa (*Theobroma cacao* L.) clones/ Badegana,-A.M.; Amang, J.; Mpe,-J.M.
Revista de Ciencias Agrarias (Portugal). (2004). v. 27(2/4) p. 187-194.
Keywords: Cocoa; *Theobroma cacao*; Clones; Shlbergella singularis; Hemiptera; Feeding preferences

PROQUEST

15. Effects of a novel carbohydrate and protein source on sow performance during lactation/ R L Payne, ...[et.al.]
Journal of Animal Science. Savoy:Aug 2004. Vol. 82, Iss. 8, p. 2392-2396
Keywords: Estrus; Feed Intake; Lactation; Litter Traits; Milk chollata; Sows

16. Effects of Milk Powders in Milk Chocolate/ B Liang, R W Hartel
Journal of Dairy Science. Champaign:Jan 2004. Vol. 87, Iss. 1, p. 20-31
Keywords: Milk chocolate; Milk powder
17. Forest cocoa could save endangered rainforest/ Chris Bright, Radhika Sarin
Appropriate Technology. Hemel Hempstead:Mar 2004. Vol. 31, Iss. 1, p. 38-39
18. Influence of Trans Fatty Acids on Health/ Steen Stender, Jyberg
Annals of Nutrition & Metabolism. Basel:Mar/Apr 2004. Vol. 48, Iss. 2, p. 61-66
19. Microbiology of Cocoa Fermentation and its Role in Chocolate Quality/ Rosane F Schwan, Alan E Wheals
Critical Reviews in Food Science and Nutrition. Boca Raton:2004. Vol. 44, Iss. 4, p. 205-21
Keywords: Cocoa; Fermentation; Microbiology; Diocolase quality
20. Milk and Chocolate: Quite Likely One of the Best Combinations in the World / Anonymous
Dairy Foods. Troy:May 2004. Vol. 105, Iss. 5, p. 36-37

SCIENCE DIRECT

21. Cryopreservation of cocoa (*Theobroma cacao L.*) somatic embryos for long-term germplasm storage/Jong-Yi Fang, Andrew Wetten, Paul Hadley
Plant Science, Volume 166, Issue 3, March 2004, p. 669-675, ISSN 0168-9452
Keywords:Cocoa; Cryopreservation; Encapsulation dehydration; Somatic embryos; Sucrose

22. Extracts of cocoa (*Theobroma cacao* L.) leaves and their antioxidant potential/H. Osman, R. Nasarudin, S. L. Lee
Food Chemistry, Volume 86, Issue 1, June 2004, p. 41-46,
ISSN 0308-8146
Keywords: **Cocoa leaf; Antioxidant activity; Oil emulsion; Theobroma cacao**
23. Impact of removing diseased pods on cocoa black pod caused by Phytophthora megakarya and on cocoa production in Cameroon/M. Ndoumbe-Nkeng, ...[et.al.]
Crop Protection, Volume 23, Issue 5, May 2004, p. 415-424,
ISSN 0261-2194
Keywords: **Epidemiology; Generalized linear mixed model; Phytophthora megakarya; Phytosanitary pod removal; Theobroma cacao**
24. Tree species richness and density affect parasitoid diversity in cacao agroforestry/Carlos Frankl Sperber, ...[et.al.]
Basic and Applied Ecology, Volume 5, Issue 3, 21 June 2004,
p. 241-251, ISSN 1439-1791
Keywords: **Biodiversity hotspot; Brazilian Atlantic Forest; Cabruca; Canopy; Habitat heterogeneity; LME; Seasonality; Wasps**
25. Use of narrow-angle cone nozzles to spray cocoa pods and other slender biological targets/Roy Bateman
Crop Protection, Volume 23, Issue 10, October 2004, p. 989-999,
ISSN 0261-2194
Keywords: **Manual sprayers; Application efficiency; Cone nozzle; Fungicide; Droplet size spectra; Cone angle; Pesticide deposition; Cocoa; Theobroma cacao**

TEEAL

26. Adoption of intensive monocrop horticulture in Southern Cameroon/ Gockowski J; Ndoumbe M
Agricultural Economics. 2004. 30 (3) p. 195-202 ISSN:0169-5150
CD Volume:432
Keywords:Agricultural chemicals; Agricultural policy; Cash crops; Cocoa;Crop production; diversification; Farminputs; Horticultural crops; Innovation adoption; Intensification; Intensive cropping; Monoculture; Socioeconomics.
27. Assessment of resistance to witches'broom disease in clonal and segregating populations of *Theobroma cacao*/ Surujdeo Maharaj; S Umaharan; P Butler D R
Plant Disease. 2004. 88 (8) p. 797-803 ISSN:0191-2917
CD Volume:440
Keywords:Cocoa; Correlation analysis; Disease resistance; Epidemiology; Fungal diseases; Genes; Genotypes; Germplasm; Inoculation; Methodology; Plant diseases; Plant pathogenic fungi; Plant pathogens; Pollination; Prepatent period; Progeny; Protected cultivation; Screening; Segregation; Witches'brooms; *Crinipellis perniciosa*.
28. Design parameters for cocoa pod breaker/ Bamgboye A I; Odima Ojoh
AMA, Agricultural Mechanization in Asia, Africa and Latin America. 2004. 35 (2) p. 2630 ISSN:0084-5841 CD Volume:435
Keywords:Breakage; Cocoa; Design; Farm machinery; Moisture content; Physical properties; *Theobroma cacao*; *Theobroma*; Sterculiaceae; Malvales; Dicotyledons; Angiosperms; Spermatophyta; Plants

29. Effect of polyphenol concentration on pyrazine formation during cocoa liquor roasting/ Misnawi Jinap; S Jamilah; B Nazamid S
Food Chemistry. 2004. 85 (1) p. 73-80 ISSN:0308-8146
CD Volume:431

Keywords:Amino acids; Aroma; Bitterness; Chemical composition; Cocoa; Flavour; Flavour compounds; Formation; Polyphenols; Pyrazines; Reducing sugars; Roasting;Theobroma cacao;Theobroma; Sterculiaceae; Malvales; Dicotyledons; Angiosperms; Spermatophyta; Plants

30. Effects of temperature and light integral on early vegetative growth and chlorophyll fluorescence of four contrasting genotypes of cacao (Theobroma cacao)/ Daymond A; J Hadley P
Annals of Applied Biology. 2004. 145 (3) p. 257-262
ISSN:0003-4746 CD Volume:433

Keywords:Chlorophyll; Cocoa; Cultivars; Fluorescence; Genotypes; Growth; Leaves; Light; Lightrelations; Stems; Temperature; Varietal reactions; Bahia; Brazil; Ghana; Malaysia; Cacao;Theobroma cacao.

31. Extracts of cocoa (Theobroma cacao L.) leaves and their antioxidation potential/ Osman H; Nasarudin R; Lee S L
Food Chemistry. 2004. 86 (1) p. 41-46 ISSN:0308-8146
CD Volume:431

Keywords:Caffeine; Catechin; Cocoa; Epicatechin; Gallic acid; Leaves; Medicinal plants; Pharmacology; Plant extracts; Polyphenols; Shoots; Identifiers antioxidant properties;Theobroma cacao.

32. Mango seed uses: thermal behaviour of mango seed almond fat and its mixtures with cocoa butter/ Solis Fuentes ; J A Duran de Bazua M C

Bioresource Technology. 2004. 92 (1) p. 71-78 ISSN:0960-8524
CD Volume:432

Keywords:Almonds; Chemical composition; Cocoa; Cocoa products; Fatty acids; Linoleic acid; Mangoes; Oleic acid; Palmiticacid; Physicochemical properties; Plant fats.

33. Molecular analysis of the major Phytophthora species on cocoa/ Appiah A A Flood J Archer S A Bridge P D

Plant Pathology. 2004. 53 (2) p. 209-219 ISSN:0032-0862

CD Volume:433

Keywords:Cocoa; Fungal diseases; Genetic variation; Intergenic DNA; Methodology; Nucleotide sequences; Plant diseases; Plant pathogenic fungi; Plant pathogens; Ribosoma IRNA; Techniques; Phytophthora

34. Ochratoxin A in Italian marketed cocoa products /Tafuri A Ferracane R Ritieni A

Food Chemistry. 2004. 88 (4) p. 487-494 ISSN:0308-8146

CD Volume:431

Keywords:Cocoa; Cocoa products; Food contamination; Ochra toxins; Italy; Identifiers: Hyphomycetes; Ochratoxin A.*Aspergillus*; *Penicillium*; *Theobroma cacao*.

TROPAG & RURAL

35. Adoption of cocoa/Ruf, F; Yoddang
From slash and burn to replanting: green revolutions in the Indonesian uplands?. 2004; p. 173-191
Keywords: Cocoa; Adoption
36. Chocolate forests and monocultures: a historical review of cocoa growing and its conflicting role in tropical deforestation and forest conservation/Ruf,-F; Schroth,-G
Agroforestry and biodiversity conservation in tropical landscapes 2004; p. 107-134
Keywords : Chocolate forest; Monoculture; Historical review; Cocoa growing; Tropical deforestation; Forest conservation
37. Design parameters for cocoa pod breaker / Bamgboye, A.I; Odima,Ojoh
Agricultural Mechanization in Asia Africa and Latin America Japan 2004; 35(2) p. 26-30
Keywords : Cocoa pod breaker; Design parameter
38. Effect of low pressures on the survival of three cocoa pests at 30 degrees C./ Finkelman, S ...[et.al.]
Journal of Stored Products Research UK. 2004; 40(5) p. 499-506
Keywords : Cocoa; Pest; Low pressure; Survival
39. Export commodity production and broad-based rural development: coffee and cocoa in the Dominican Republic/Siegel, P.B; Alwang,J
Policy Research Working Paper World Bank 2004; (3306): 88 p.
Keywords : Coffee; Cocoa; Export commodity production; Rural development
40. First Ecuadorean "Nacional" cocoa collection based on organoleptic characteristics. / Deheuvels, O ...[et.al.]
Tropical Science UK. 2004; 44(1) p. 23-27
Keywords : Cocoa; Collection; Organoleptic characteristics

41. Impact of removing diseased pods on cocoa black pod caused by Phytophthora megakarya and on cocoa production in Cameroon/Ndoumbe Nkeng, M ...[et.al.]
Crop Protection 2004; 23(5): p. 415-424
Keywords : Cocoa; Cocoa black pod; Diseases; Phytophthora megakarya
42. Linking farmers with markets: the case of cocoa/Johnson, G,I ...[et.al.]
Agriproduct supply chain management in developing countries 2004; p. 179-187
Keywords : Cocoa; Farmers; Markets
43. Public/private partnerships in agroforestry: the example of working together to improve cocoa sustainability/Shapiro, H.Y; Rosenquist, E,M
Agroforestry Systems Netherlands 2004; 61-62(special issue): p. 453-462
Keywords : Cocoa sustainability; Agroforestry; Public
44. Rapid isolation of DNA from chocolate and date palm tree crops/Haymes,-K-M ...[et.al.]
Journal of Agricultural and Food Chemistry 2004; 52(17): p. 5456-5462
Keywords : Chocolate; Date palm; DNA
45. Rootstock effects on cocoa in Sabah, Malaysia/Pang Thau Yin, J
Experimental Agriculture UK 2004; 40(4): p. 445-452
Keywords : Cocoa; Rootstock; Malaysia
46. Tree crops and paddy cropping systems: cocoa in Malinau/Ruf, F; Yoddang
From slash and burn to replanting: green revolutions in the Indonesian uplands?. 2004; p. 83-94
Keywords : Cocoa; Tree crops; Poddy; Cropping system

47. Use of dium chloride to control epiphytes on cocoa in Ghana./
Acheampong, K; Frimpong, K,O

Tropical Science UK. 2004; 44(1) p. 51-53

Keywords : Cocoa; Epiphyte; Control; Sodium chloride; Ghana

48. Use of ferlizer and fungicide to sustain cocoa producon in severe
black pod areas./

Opoku,-I-Y; Frimpong,-K-O; Appiah,-M-R

Tropical-Science-UK. 2004; 44(2) p. 95-99

**Keywords : Cocoa; Cocoa production; Fertilizer; Fungicide;
Black pod areas**

BIBLIOGRAFI 2005

AGRICOLA

49. Analysis of molecular diversity in Crinipellis perniciosa with AFLP markers/ Ploetz,RC ...[et.al.].
European journal of plant pathology 2005 Apr; 111(4): p. 317-326.
Keywords : Crimipellis permiclosa; AFLP markers; Molecular diversity
50. Application of chemical and biological agents for the management of frosty pod rot (*Moniliophthora roreri*) in Costa Rican cocoa (*Theobroma cacao*)/Bateman,RP ...[et.al.]
Annals of applied biology 2005; 147(2): p. 129-138.
Keywords : Cocoa; Theobroma cacao; Frooty pod rot; Moniliophthora roreri
51. Assessing the genetic diversity in the International Cocoa Genebank, Trinidad (ICG,T) using isozyme electrophoresis and RAPD/Sounigo,O ...[et.al.]
Genetic resources and crop evolution 2005 Dec; 52(8): p. 1111-1120.
Keywords : International cocoa genebank; Genetic diversity; Isozyme electrophoresis
52. Bean quality traits and sensory evaluation of wild Guianan cocoa populations (*Theobroma cacao* L.)/Assemat, S ...[et.al.]
Genetic resources and crop evolution 2005 Nov; 52(7): p. 911-917.
Keywords : Theobroma cacao; Wild guianan cocoa; Bean quality
53. Biochemical changes during the development of witches' broom: the most important disease of cocoa in Brazil caused by Crinipellis perniciosa/Scarpari,LM ...[et.al.]
Journal of experimental botany 2005 Mar; 56(413): p. 865-877.
Keywords : Cocoa; Crimipellis permiclosa; Biochemical; Witchos broom; Diseases

54. Causal agents of witches' broom and frosty pod rot of cacao (chocolate, *Theobroma cacao*) form a new lineage of Marasmiaceae/Aime, MC; Phillips Mora,W
Mycologia 2005 Sept-Oct; 97(5): p. 1012-1022.
Keywords : Cacao; Chocolate; Theobroma cacao; Witches' broom; Diseases
55. Coffee vs. Cacao: A case study from the Vietnamese Central Highlands/Ha,DT; Shively,G
Journal of natural resources and life sciences education 2005; 34(34): p. 107-111.
Keywords : Coffee; Cacao; Vietnamese
56. Effect of imidacloprid and mixed pirimiphosmethyl and bifenthrin on nontarget arthropods of cocoa/Adu Acheampong,R; Ackonor,JB.
Tropical science 2005; 45(4): p. 153-154.
Keywords : Cocoa; Imidacloprid; Pirimiphosmethyl; Difenthrin; Arthropod
57. Essential oils in the leaves of cocoa (*Theobroma cacao* L.) clone UIT1 and NA33/ Chee, SYK; Malek, SNA; Ramli, N
Journal of essential oil research:JEOR 2005 May-June; 17(3): p. 312-313.
Keywords : Cocoa; Theobroma cacao; Clone; Essential oils Leaves
58. Establishment of the fungal entomopathogen *Beauveria bassiana* (Ascomycota: Hypocreales) as an endophyte in cocoa seedlings (*Theobroma cacao*)/Posada,F; Vega,FE
Mycologia 2005 NovDec; 97(6): p. 1195-1200.
Keywords : Beauveria bassiana; Fungal; Entomopathogen; Endophyte; Cocoa seedlings; Theobroma cacao

59. Flavonoids from *Theobroma cacao* downregulate inflammatory mediators/Ramiro, E ...[et.al.]
Journal of agricultural and foodchemistry 2005 Nov 2; 53(22): p. 8506-8511.
Keywords : Theobroma cacao; Flavonoids; Mediators
60. Identification and characterization of the major aspartic proteinase activity in *Theobroma cacao* seeds/Guilloteau, M ...[et.al.]
Journal of the science of food and agriculture 2005 Mar; 85(4): p. 549-562.
Keywords : Theobroma cacao; Seeds; Major aspartic proteinase
61. Landuse system modeling and analysis of shaded cacao production in Belize/ Rosenberg,DE; Marcotte,TP
Agroforestry systems 2005; 64(2): p. 117-129.
Keywords : Cacao; Shaded; Production; Landuse; Modeling
62. NEP1 orthologs encoding necrosis and ethylene inducing proteins exist as a multigene family in *Phytophthora megakarya*, causal agent of black pod disease on cacao/Bae,H ...[et.al.]
Mycologicalresearch 2005 Dec; 109(12): p. 1373-1385.
Keywords : Cacao; Black pod disease; Phytophthora megakarya; Ethylene
63. Production constraints on cocoa agroforestry systems in West and Central Africa: the need for integrated pest management and multiinstitutional approaches/ Sonwa,DJ ...[et.al.]
Forestry chronicle 2005 May-June; 81(3): p. 345-349.
Keywords : Cocoa; Agroforestry; Integrated pest management
64. Relationships between black pod and witches'broom diseases in *Theobroma cacao*/ Thevenin, JM ...[et.al.]
Phytopathology 2005 Nov; 95(11): p. 1301-1307.
Keywords : Theobroma cacao; Black pod; Witches'broom disease

65. Resistance gene mapping for witches' broom disease in *Theobroma cacao* L. in an F2 population using SSR markers and candidate genes/ Brown, JS ...[et.al.]
Journal of the American Society for Horticultural Science 2005 May-June; 130(3): p. 366-373.
Keywords : Theobroma cacao; Gene mapping; Witches'broom disease
66. Retrospective determination of the parental population of superior cacao (*Theobroma caco* L.) seedlings and association of microsatellite alleles with productivity/Schnell, RJ ...[et.al.]
Journal of the American Society for Horticultural Science 2005 Mar; 130(2):
Keywords : Cacao; Theobroma cacao; Seedlings; Microsatelite alelo
67. Soluble albumin and biological value of protein in cocoa (*Theobroma cacao* L.) beans as a function of roasting time/Abecia Soria,L; Pezoa Garcia, NH; Amaya Farfan, J
Journal of food science 2005 May; 70(4): p. S294-S298
Keywords : Cacao; Theobroma cacao; Albumin; Protein; Beans; Biological value
68. *Trichoderma harzianum* produces nonanoic acid, an inhibitor of spore germination and mycelial growth of two cacao pathogens/Aneja,M; Gianfagna,TJ; Hebbar,PK
Physiological and molecular plant pathology 2005 Dec; 67(6): p. 304-307.
Keywords : Cacao; Pathogens; Trichoderma harzianum; Inhibitor; Spore germination; Mycelial growth
69. Usefulness of the detached pod test for assessment of cacao resistance to *Phytophthora* pod rot/Iwaro,AD. ...[et.al.]
European journal of plant pathology 2005 Oct; 113(2): p. 173-182.
Keywords : Cacao; Resistance; Phytophthora pod rot

70. Variability and selection for morphological bean traits in wild cocoa trees (*Theobroma cacao* L.) from French Guiana/ Lachenaud, P; Oliver,G
Genetic resources and crop evolution 2005 May; 52(3): p. 225-231.
Keywords : Wild cocoa; Theobroma cacao; Selection; Morphological bean traits

AGRIS

71.	<p>Effect of potassium silicate and potassium phosphite on the induction of resistance in cocoa seedlings against <i>Vercillium dahliae</i> Kleb. / Ribeiro-Junior,-P.M. <i>Lavras</i>, MG (Brazil). 2005. 75 p.</p> <p>Keywords : Cocoa; Seedlings; Verticillium dahliae; Potassium silicate; Potassium phosphate</p>
72.	<p>Food additive Kakaovit for manufacture of confectionery. / Romasheikhin,-P; Skokleenko,-M; Pinchiuk,-T <i>Jelgava</i> (Latvia). LLU PTF. 2005. p. 170-176.</p>

PROQUEST

73. Chocolate and Cardiovascular Health: Is It Too Good To Be True / Merlin W Ariefdjohan, Dennis A Savaiano?
Nutrition Reviews. Washington:Dec 2005. Vol. 63, Iss. 12, Part 1 p. 427-30
Keywords : Chocolate; Cardiovascular
74. Chocolate covered berries stay fresh and protected in stand-up pouch/ Kathryn Martin
Food Engineering. Troy:Aug 2005. Vol. 77, Iss. 8, p. 19
Keywords : Chocolate; Berries; Stay fresh

SCIENCEDIRECT

75. Antioxidant and biological activity of phenolic pigments from *Theobroma cacao* hulls extracted with supercritical CO₂/M. Arlorio, ...[et.al.]
Food Research International, Volume 38, Issues 8-9, Third International Congress on Pigments in Food, October-November 2005, p. 1009-1014, ISSN 0963-9969
Keywords: *Theobroma cacao* L.; Antioxidant; Antiradical; Phenolics; Supercritical CO₂ extraction
76. Characterisation of the cacao somatic embryogenesis receptor-like kinase (SERK) gene expressed during somatic embryogenesis/Marcelo de Oliveira Santos, ...[et.al.]
Plant Science, Volume 168, Issue 3, March 2005, p. 723-729, ISSN 0168-9452
Keywords: RT-PCR; Molecular phylogeny; Gene family; Gene cloning; Gene expression; *Theobroma cacao*
77. Determination of aflatoxin levels in some dairy and food products which consumed in Ankara, Turkey/Hasan Aycicek, Abdurrahman Aksoy, Sahan Saygi
Food Control, Volume 16, Issue 3, March 2005, p. 263-266, ISSN 0956-7135
Keywords: Aflatoxin; Dairy products; Hazelnut; ELISA
78. Developmental expression of stress response genes in *Theobroma cacao* leaves and their response to Nep1 treatment and a compatible infection by *Phytophthora megakarya*/Bryan A. ...[et.al.]
Plant Physiology and Biochemistry, Volume 43, Issue 6, June 2005, p. 611-622, ISSN 0981-9428
Keywords: Cacao; Developmental expression; Nep1; *Phytophthora megakarya*; Plant defense; Susceptibility; *Theobroma cacao*

79. Gene expression in leaves of *Theobroma cacao* in response to mechanical wounding, ethylene, and/or methyl jasmonate/Bryan A. Bailey, ...[et.al.]
Plant Science, Volume 168, Issue 5, May 2005, p. 1247-1258, ISSN 0168-9452
Keywords: *Theobroma cacao; Methyl jasmonate; Ethylene; Wounding; Induced resistance*
80. NEP1 orthologs encoding necrosis and ethylene inducing proteins exist as a multigene family in *Phytophthora megakarya*, causal agent of black pod disease on cacao/Hanhong Bae, ...[et.al.]
Mycological Research, Volume 109, Issue 12, December 2005, p. 1373-1385, ISSN 0953-7562.
Keywords: *Cacao; Black pod disease; Phytophthora megakarya; Ethylene*
81. Physiological production model for cocoa (*Theobroma cacao*): model presentation, validation and application/Pieter A. Zuidema, ...[et.al.]
Agricultural Systems, Volume 84, Issue 2, May 2005, p. 195-225, ISSN 0308-521X
Keywords: *Crop production; Cocoa; Cacao; Theobroma cacao; Simulation models; SUCROS*
82. Size and sex compositions, length-weight relationship, and occurrence of the Brazilian sharpnose shark, *Rhizoprionodon lalandii*, caught by artisanal fishery from southeastern Brazil/ Fabio S. Motta, ...[et.al.]
Fisheries Research, Volume 74, Issues 1-3, August 2005, p. 116-126, ISSN 0165-7836
Keywords: *Elasmobranchii; Artisanal fishery; Population biology; Reproductive seasonality; Rhizoprionodon lalandii*

83. Trichoderma harzianum produces nonanoic acid, an inhibitor of spore germination and mycelial growth of two cacao pathogens/Madhu Aneja, Thomas J. Gianfagna, Prakash K. Hebbar
Physiological and Molecular Plant Pathology, Volume 67, Issue 6, December 2005, p. 304-307, ISSN 0885-5765
Keywords: Antifungal activity; Biocontrol; Witches' broom disease; Frosty pod disease; Crinipellis perniciosa; Moniliophthora roreri; Theobroma cacao; Pelargonic acid

TEEAL

84. Application of chemical and biological agents for the management of frosty pod rot (Moniliophthora roreri) in Costa Rican cocoa (Theobroma cacao)/ Bateman R P ...[et.al.]
Annals of Applied Biology. 2005. 147. (2.). 129-138 ISSN:0003-4746 CD Volume:451
Keywords: Biological control; Biological control agents; Bitertanol; Chemical control; Cocoa; Copperhydroxide; Flutolanil; Fungicides; Insect control; Insect pests; Oxathiin fungicides; Pest control; Plant pests; Triadimenol Costa Rica; Clonostachys byssicola; Hyphomycetes; Trichoderma asperellum Insects. Moniliophthoraroreri; Theobroma cacao; Trichoderma.
85. Assessment of genetic diversity on a sample of cocoa accessions resistant to witches' broom disease based on RAPD and pedigree data/ Dos Santos R C ...[et.al.]
Bragantia. 64(3). 2005. 361-368 ISSN:0006-8705 CD Volume:457
Keywords: Coefficient of parscentage; Molecular markers; Genetic diversity; Cacao; Disease resistant; Witches broom disease; RAPD

86. Development and pathogenicity of the fungus *Crinipellis perniciosa* on interaction with cacao leaves/ Kilaru A; Hasenstein K H
Phytopathology. 2005. 95 (1). 101-107 ISSN:0031-949X
CD Volume:456
Keywords:**Cocoa; Fungal diseases; Hyphae; Infection; Leaf meristems; Leaves; Mycelium; Pathogenicity; Plant cuticle; Plant diseases; Plant pathogenic fungi; Plant pathogens.**
87. Evaluation of cacao (*Theobroma cacao*) clones against seven Colombian isolates of *Moniliophthora roreri* from four pathogen genetic groups/ Phillips Mora W ...[et.al.]
Plant Pathology. 2005. 54 (4). 483-490 ISSN:0032-0862
CD Volume:452
Keywords:**Clones; Cocoa; Disease resistance; Fungal diseases; Fungal spores; Genetic variation; Genotypes; Plant diseases; Plant pathogenic fungi; Plant pathogens; Pods; Colombia; Moniliophthora roreri; Theobroma cacao**
88. Physiological production model for cocoa (*Theobroma cacao*): model presentation, validation and application/ Zuidema P A ...[et.al.]
Agricultural Systems. 2005. 84 (2). 195-225 ISSN:0308-521X
CD Volume:449
Keywords:**Cocoa;Crop production; Crop yield; Growth; Plant physiology; Simulation models; Yield factors; Theobroma cacao.**
89. Preparation and rheological properties of a dairy dessert based on whey protein/potato starch/ El Garawany; G A El Salam M H A
Food Chemistry. 2005. 91 (2). 261-267 ISSN:0308-8146
CD Volume:448
Keywords:**Carrageenan;Cocoa; Desserts; Gels; Heat treatment; Milkfat; Potato starch; Cacao Rheological properties; Sucrose; Whey protein;Theobroma**

90. Relationships between black pod and witches'broom diseases in *Theobroma cacao*/ Thevenin J M ...[et.al.]
Phytopathology. 2005. 95 (11). 1301-1307 ISSN:0031-949X
CD Volume:456
Keywords:**Cocoa;** **Disease resistance;** **Fungal diseases;**
Heritability; **Plant diseases;** **Plant pathogenic fungi;**
Plant pathogens;**Pods;** **Shoots;****Peronosporomycetes;**
Theobroma cacao.
91. Review of methods to determine chainbreaking antioxidant activity in food/ Roginsky V; Lissi E A
Food Chemistry. 2005. 92 (2). 235-254 ISSN:0308-8146
CD Volume:448
Keywords:**Analytical methods;** **Antioxidants;** **Chemical composition;**
Cocoa; **Coffee;** **Diets;** **Fruits;**
Polyphenols; **Tea;** **Vegetables;** **Functional properties;**
Camelliasinensis; **Coffea;** **Theobroma cacao ;****Mammals;**
Vertebrates;**Chordata;****Rubiales;**
Camellia;**Theaceae;****Theales**
92. Sorption of propylene oxide by various commodities/ Isikber A A ...[et.al.]
Journal of Stored Products Research. 2005. 41 (3). 311-321
ISSN:0022-474X CD Volume:448
Keywords:**Application rates;** **Bulbs;** **Cocoa;** **Maize;**
Propyleneoxide; **Sorption;** **Wheat;** **Narcissus;**
Theobroma cacao; **Triticuma estivum;** **Zea mays;**
Amaryllidaceae.

TROPAG & RURAL

93. Analysis of the factors affecting yield and yield variability in the SG2 cocoa hybrid variety in Papua New Guinea / Efron,Y; Epaina, P; Taisa, S
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 50-61
Keywords: **Cocoa hybrid; Yield; Variability; Papua New Guinea**
94. Assessment of the yield of individual cacao trees in four field trials/ Adomako, B; Adu Ampomah, Y
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21-October-2003,-Accra,-Ghana. 2005; p. 41-49
Keywords: **Theobroma cacao; Cacao trees; Yield**
95. Breeding strategies to improve cocoa production in Papua New Guinea/ Efron, Y; Epaina, P; Marfu, J
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 12-32
Keywords: **Theobroma cacao; Cacao; Breeding strategies; Production; Papua New Guinea**
96. Cocoa/Nair, R.V; Amma, S.P; Mallika, V.K
Handbook of industria crops 2005; p. 163-233
Keywords : **Theobroma cacao; Cacao**
97. Genetic diversity of cacao and its utilization./ Bartley, B.G.D
The genetic diversity of cacao and its utilization. 2005; 354 p.
Keywords : **Theobroma cacao; Cacao; Genetic diversity**

98. High density planting of cacao the Trinidad and Tobago experience./ Maharaj, K ...[et.al.]
Proceeding of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 171-182
Keywords : Theobroma cacao; Cacao; Planting density; Trinidad; Tobacco
99. Land-use system modeling and analysis of shaded cacao production in Belize/ Rosenberg, D.E; Marcotte, T.P
Agroforestry Systems Netherlands. 2005; 64(2) p. 117-129
Keywords : Theobroma cacao; Land use; Shading; Production; Belize
100. Physiological characterisation of cocoa germplasm / Daymond, A; Hadley, P
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 103-109
Keywords : Theobroma cacao; Germplasm; Physiological characteristic
101. Relationship between vigour, yield and yield efficiency of cocoa clones planted at different densities / Efron,-Y ...[et.al.]
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 92-102
Keywords : Theobroma cacao; Cacao; Clones; Planting density; Visour; Yields
102. Researcher participatory on-farm selection of improved cocoa varieties the Nigerian experience/ Aikpokpodion, P.O ...[et.al.]
Proceedings of the international workshop on cocoa breeding for improved production systems, 19-21 October 2003, Accra, Ghana. 2005; p. 183-188
Keywords : Theobroma cacao; Cacao; Selection; Nigeria

103. Water relations and gas exchange in *Theobroma cacao* var. Guasare under periods of water deficit/Rada,-F ...[et.al.]

Revista de la Facultad de Agronomia Universidad del Zulia Venezuela 2005; 22(2): p. 112-120

Keywords : *Theobroma cacao; Cocoa; Water relations; Gas exchange; Water deficit*

BIBLIOGRAFI 2006

AGRICOLA

104. Biodiversity in tropical agroforests and the ecological role of ants and ant diversity in predatory function/Philpott,StacyM; Armbrecht, Inge
Ecological Entomology 2006 Aug; 31(4): p. 369-377.
105. Cocoa polyphenols inhibit phorbol esterinduced superoxide anion formation in cultured hl60 cells and expression of cyclooxygenase2 and activation of nf[kappa]b and mapks in mouse skin in vivo/ Lee,KiWon ...[et.al.]
Journal of nutrition 2006 May; 136(5): p. 1150-1155.
106. Combining ability for disease resistance, yield, and horticultural traits of cacao (*Theobroma cacao* L.) clones/Cervantes Martinez,C ...[et.al.]
Journal of the American Society for Horticultural Science 2006 Mar; 131(2): p. 231-241.
Keywords : *Theobroma cacao*; Combinations ability; Disease resistance; Yields; Clones
107. Effects of carbon source and explant type on somatic embryogenesis of four cacao genotypes/Traore, A; Guiltinan, M J
Hort Science: a publication of the American Society for Horticultural Science. 2006 June; 41(3): p. 753-758.
Keywords : *Theobroma cacao*; Genotypes; Carbon; Explants; Somatic embryogenesis

108. Expected selection efficiency for resistance to cacao pod rot (*Phytophthora palmivora*) comparing leaf disc inoculations with field observations/Tahi,G M ...[et.al.]
Euphytica:international journal of plant breeding. 2006 May; 149(12): p. 35-44.
Keywords : Theobroma cacao; Selection; Pod rot; Phytophthora palmivora; Disease resistance; Leaf discinoculation
109. First report of frosty pod rot (moniliasis disease) caused by Moniliophthora roreri on cacao in Belize/Phillips Mora,W...[et.al.]
Plant Pathology 2006 Aug; 55(4): 584. p.
Keywords :Theobroma cacao; Frosty pod rot; Nonilrophthora roreri
110. Foliar resistance of cacao (*Theobroma cacao*) to *Phytophthora palmivora* as an indicator of pod resistance in the field: interaction of cacao genotype, leaf age and duration of incubation/Tahi,GM ...[et.al.]
Plant Pathology 2006 Dec; 55(6): p. 776-782.
Keywords : Theobroma cacao; Phytophthora palmivora; Pod rot; Disease resistance; Genotypes; Leaf age; Incubation
111. Fungal and plant gene expression during the colonization of cacao seedlings by endophytic isolates of four *Trichoderma* species/Bailey, BA ...[et.al.]
Planta 2006 Nov; 224(6): p. 1449-1464.
Keywords : Theobroma cacao; Seedling; Trichoderma; Gene Expression; Endophytic isolates
112. Fusarium induced diseases of tropical, perennial crops/Ploetz,RC
Phytopathology 2006 June; 96(6): p. 648-652.
Keywords : Theobroma cacao; Fusarium

113. Genetic and biological diversity of *Trichoderma stromaticum* a mycoparasite of the cacao witches' broom pathogen/Souza, JTde ...[et.al.]
Phytopathology 2006 Jan; 96(1): p. 61-67.
Keywords : Theobroma cacao; Genetic diversity; Biological diversity; Trichoderma stromaticum; Witches broom; Mycoparasite
114. Genetic diversity and structure of managed and seminatural populations of cocoa (*Theobroma cacao*) in the huallaga and ucayali valleys of peru/Zhang,dapeng ...[et.al.]
Annals of Botany 2006 Sept; 98(3): p. 647-655.
Keywords : Theobroma cacao; Genetic diversity; Population structure; Peru
115. High performance liquid chromatography separation and purification of cacao (*Theobroma cacao* L.) procyanoanthocyanidins according to degree of polymerization using a diol stationary phase/ Kelm, MA ...[et.al.]
Journal of Agricultural and Food Chemistry 2006 Mar 8; 54(5): p. 1571-1576.
Keywords : Theobroma cacao; Cacao; HPLC; Purification; Procyanoanthocyanidins; Polymenization
116. Mapping QTLs for Witches' Broom (*Crinipellis perniciosa*) resistance in cacao (*Theobroma cacao* L.)/ Faleiro, FG ...[et.al.]
Euphytica:International Journal of Plant Breeding. 2006 May; 149(12): p. 227-235.
Keywords : Theobroma cacao; Cacao; QTLs mapping; Witches broom; Crinipellis perniciosa; Disease resistance
117. Microsatellite loci transferability from *Theobroma cacao* to *Theobroma*/Alves, RafaelM ...[et.al.]
Molecular Ecology Notes 2006 Dec; 6(4): p. 1219-1221.
Keywords : Theobroma cacao; Cacao; Loci; Microsatellite transferability

118. Molecular characterization of fungal endophytic morphospecies isolated from stems and pods of *Theobroma cacao*/Crozier,J ...[et.al.]
Plant Pathology 2006 Dec; 55(6): p. 783-791.
Keywords : Theobroma cacao; Molecular characterization; Fungal endophytic morphospecies; Isolation
119. Molecular definition of the taste of roasted cocoa nibs (*Theobroma cacao*) by means of quantitative studies and sensory experiments/Stark,T; Bareuther,S; Hofmann,T
Journal of Agricultural And Food Chemistry 2006 July 26; 54(15): p. 5530-5539.
Keywords : Theobroma cacao; Cocoa nibs; Taste; Sensory evaluation
120. Nitrogen value of pruning residues of some neotropical *Albizia* species with potential as shade for cacao/Anim Kwapong,GJ
Tropical Science 2006 Mar; 46(1):p. 45-49.
Keywords : Theobroma cacao; Albizia; Shading; Nitrogen value; Pruning residues
121. Overexpression of a cacao class I chitinase gene in *Theobroma cacao* L. enhances resistance against the pathogen, *Colletotrichum gloeosporioides*/ Maximova, SN ...[et.al.]
Planta 2006 Sept; 224(4): p. 740-749.
Keywords : Theobroma cacao; Chitinase gene; Disease resistance; Colletotrichium gloeospainoids
122. Smallholder agricultural expansion in La Amistad Biosphere Reserve: perceived vs. real impacts of cacao and cattle/Connelly,A; Shapiro, EN
Journal of Sustainable Forestry 2006; 22(12): p. 115-141.
Keywords : Theobroma cacao; Cattle; Smallholder agriculture

123. Sources of resistance to phytophthora pod rot at the international cocoagenebank, trinidad/ Iwaro, AD; Butler, DR; Eskes, AB
Genetic Resources and Crop Evolution. 2006 Feb; 53(1): p. 99-109.
Keywords : **Theobroma cacao;** **Cocoa;** **Gene bank;**
Phytophthora palmivora; **Pod rot;** **Disease resistance;** **Trinidad**
124. Variation of the response of clonal cocoa to attack by cocoa pod borer Conopomorpha cramerella (Lepidoptera: Gracillariidae) in Sabah/Teh, CL; Pang, JTY; Ho, CT
Crop Protection 2006 July; 25(7): p. 712-717.
Keywords : **Theobroma cacao;** **Cocoa;** **Clones;** **Pod borer;**
Conopomorpha Cramerella

PROQUEST

125. Development of non-conventional thermo-resistant chocolate for the tropics/ S.O. Ogunwolu, C.O. Jayeola
British Food Journal. Bradford:2006. Vol. 108, Iss. 6, p. 451-455
Keywords : **Theobroma cacao;** **Thermo-resistant chocolate**
126. Emerging role of flavonoid-rich cocoa and chocolate in cardiovascular health and disease/ Mary B Engler, Marguerite M Engler
Nutrition Reviews. Washington:Mar 2006. Vol. 64, Iss. 3, p. 109-118
Keywords : **Cocoa;** **Chocolate;** **Flavonoid;** **Cardiovascular health;** **Cardiovascular disease**

SCIENCEDIRECT

127. Comparative study of different cocoa (*Theobroma cacao* L.) clones in terms of their phenolics and anthocyanins contents/Nicolas Niemenak, ...[et.al.]

Journal of Food Composition and Analysis, Volume 19, Issues 6-7, Biodiversity and nutrition: a common path, September-November 2006, p. 612-619, ISSN 0889-1575

Keywords: Anthocyanins; HPLC; Principal components analysis; Polyphenolic compounds; Seeds; *Theobroma cacao*

128. Effect of cane molasses amendment on biocontrol of frosty pod rot (*Moniliophthora roreri*) and black pod (*Phytophthora* spp.) of cocoa (*Theobroma cacao*) in Panama/Ulrike Krauss, ...[et.al.]

Biological Control, Volume 39, Issue 2, November 2006, p. 232-239, ISSN 1049-9644

Keywords: Antagonism; Biological control; Black pod; *Clonostachys* spp.; Cocoa; Frosty pod rot; Molasses; *Moniliophthora roreri*; Mycoparasitism; *Phytophthora* spp.; *Theobroma cacao*; *Trichoderma asperellum*

129. Effect of pulp preconditioning on the content of polyphenols in cocoa beans (*Theobroma cacao*) during fermentation/R. Nazaruddin, ...[et.al.]

Industrial Crops and Products, Volume 24, Issue 1, July 2006, p. 87-94, ISSN 0926-6690

Keywords: Acidity; Cocoa beans; Fermentation; Pod storage; Polyphenols content

130. Genetic variability and chromosome-length polymorphisms of the witches' broom pathogen *Crinipellis perniciosa* from various plant hosts in South America/Johana Rincones, ...[et.al.]
Mycological Research, Volume 110, Issue 7, July 2006,
p. 821-832, ISSN 0953-7562
Keywords: Electrophoretic karyotype; Intraspecific genetic variability; Microsatellite primers; Pulsed field gel electrophoresis; *Theobroma cacao*
131. Influence of land-use changes on soil hydraulic properties: Implications for runoff generation/Beate Zimmermann, Helmut Elsenbeer, Jorge M. De Moraes
Forest Ecology and Management, Volume 222, Issues 1-3, 15 February 2006, p.29-38, ISSN 0378-1127
Keywords: Land cover change; Secondary forest; Infiltrability; Saturated hydraulic conductivity; Runoff generation; Deforestation; Pasture
132. Isolation and characterization of an AGAMOUS homologue from cocoa/Tetty Chaidamsari ...[et.al.]
Plant Science, Volume 170, Issue 5, May 2006, p. 968-975, ISSN 0168-9452
Keywords: Flower development; Cocoa; Agamous; Mads box
133. Necrotrophic phase of *Moniliophthora perniciosa* causes salicylic acid accumulation in infected stems of cacao/Fabio C. Chaves, Thomas J. Gianfagna,
Physiological and Molecular Plant Pathology, Volume 69, Issues 1-3, July-September 2006, p. 104-108, ISSN 0885-5765
Keywords: *Moniliophthora perniciosa*; *Theobroma cacao*; Salicylic acid; Necrotrophic; HPLC; GC-MS; Systemic induced susceptibility

134. Trichoderma theobromicola and T. paucisporum: two new species isolated from cacao in South America/Gary J. Samuels, ...[et.al.] *Mycological Research*, Volume 110, Issue 4, April 2006, p. 381-392, ISSN 0953-7562
Keywords: **Biocontrol; Hydrocrea; Moniliophthora roreri; Theobroma cacao**

TROPAG & RURAL

135. Effect of modified packaging and storage time of cocoa pods on the commercial quality of cocoa beans/Aroyeun, SO; Ogunbayo, JO; Olaiya, AO
British Food Journal 2006; 108(2/3): p. 141-151
Keywords: **Theobroma cacao; Cocoa beans; Packaging; Storage**
136. Effect of some factors postharvest on the sensory quality of the Criollo cocoa porcelana (Theobroma cacao L.)/Portillo, E; Grazianide Farinas, L ; Cros, E
Revistadel Facultadde Agronomia,Universidaddel Zulia 2006; 23(1): p. 51-59
Keywords: **Theobroma cacao; Postharvest; Sensory evaluation; Quality**
137. Electrophoretic characterization of globulins from fermented grains of three types of cocoa/Ortizde Bertorelli,L ...[et.al.]
Interciencia 2006; 31(6): p. 441-445
Keywords: **Theobroma cacao; Cocoa; Fermentation; Globulins; Electrophoretic characteristic**

138. First report of *Moniliophthora roreri* causing frosty pod rot (moniliasis disease) of cocoa in Mexico/ Phillips Mora,W ...[et.al.] *Plant Pathology* 2006; 55(4): p. 5-84
Keywords: ***Theobroma cacao*; Frosty pod rot; *Moniliophthora roreri*; Mexico**
139. Isolation of actinomycetes and endosporeforming bacteria from the cacao pod surface and their antagonistic activity against the witches' broom and black pod pathogens/Macagnan, D ...[et.al.] *Phytoparasitica* 2006; 34(2): p. 122-132
Keywords: ***Theobroma cacao*; Antagonistic; Witches'broom; Blach pod; Actinomycetes; Isolation**
140. Sources of resistance to Phytophthora pod rot at the International Cocoa Genebank, Trinidad/Iwaro, AD; Butler, DR; Eskes, AB *Genetic Resources and Crop Evolution* 2006; 53(1): p. 99-109
Keywords: ***Theobroma cacao*; Pod rot; *Phytophtora* sp; Gene bank; Disease resistance**
141. Spontaneous floristic diversity of cocoa and coffee plantations in the classified forest of Monogaga, Cote d'Ivoire/Yao, CYA ; N'Guessan, EK *Schweizerische Zeitschriftfur Forstwesen* 2006; 157(2): p. 31-36
Keywords: ***Theobroma cacao*; Cocoa; Coffee; Plantations; Flonstix diversity**
142. Spray application to cocoa pods and other small targets using cone nozzles/Bateman, RP *Aspects of Applied Biology* 2006; (77(1)): p. 79-84
Keywords: ***Theobroma cacao*; Cocoa pods; Spraying; Cone nozzles**
143. Yield efficiency in progeny trials with cocoa/Pang Thau Yin[Pang,TYJ] *Experimental Agriculture* 2006; 42(3): p. 289-299
Keywords: ***Theobroma cacao*; Progeny; Yields**

BIBLIOGTAFI 2007

SCIENCEDIRECTS

144. Cacao leaf procyanidins increase locally and systemically in response to infection by *Moniliophthora perniciosa* basidiospores/Fabio C. Chaves, Thomas J. Gianfagna, *Physiological and Molecular Plant Pathology*, Volume 70, Issues 4-6, April-June 2007, p. 174-179, ISSN 0885-5765
Keywords: **Procyanidins; Theobroma cacao; Moniliophthora perniciosa**
145. Characterization of necrosis and ethylene-inducing proteins (NEP) in the basidiomycete *Moniliophthora perniciosa*, the causal agent of witches' broom in Theobroma cacao/ Odalys Garcia, ...[et.al.] *Mycological Research*, Volume 111, Issue 4, April 2007, p. 443-455, ISSN 0953-7562
Keywords: **Basidiomycota; Cacao; Plant pathology; WBD**
146. Dietary fibre composition, antioxidant capacity and physico-chemical properties of a fibre-rich product from cocoa (*Theobroma cacao* L.)/Elena Lecumberri, ...[et.al.] *Food Chemistry*, Volume 104, Issue 3, 2007, p. 948-954, ISSN 0308-8146
Keywords: **Cocoa; Dietary fibre; Antioxidant capacity; Nutritional properties; Functional food**
147. Effects of different copper fungicide application rates upon earthworm activity and impacts on cocoa yield over four years/Lindsey Norgrove *European Journal of Soil Biology*, Volume 43, Supplement 1, November 2007, p. S303-S310, ISSN 1164-5563
Keywords: **Fungicide; Copper; Earthworms; Humid tropics; Cameroon**

148. Integrated management of Phytophthora diseases on cocoa (*Theobroma cacao* L): Impact of plant breeding on pod rot incidence/S. Nyasse, ...[et.al.]
Crop Protection, Volume 26, Issue 1, January 2007, p. 40-45, ISSN 0261-2194
Keywords: **Cocoa; Phytophthora sp.; Disease resistance; Integrated disease management; Breeding tool**
149. Involvement of calcium oxalate degradation during programmed cell death in *Theobroma cacao* tissues triggered by the hemibiotrophic fungus *Moniliophthora perniciosa*/Geruza de Oliveira Ceita, ...[et.al.]
Plant Science, Volume 173, Issue 2, August 2007, p. 106-117, ISSN 0168-9452
Keywords: **Apoptosis; Ascorbate; Cacao; Druses; H₂O₂; ROS**
150. Isolation and identification of mycoparasitic isolates of *Trichoderma asperellum* with potential for suppression of black pod disease of cacao in Cameroon/P.R. Tondje, ...[et.al..]
Biological Control, Volume 43, Issue 2, November 2007,p. 202-212, ISSN 1049-9644
Keywords: **Black pod; Cacao; Mycoparasite; Phytophthora megakarya; Theobroma cacao; Trichoderma asperellum**
151. Moisture, acidity and temperature evolution during cacao drying/P. Garcia-Alamilla, ...[et.al.]
Journal of Food Engineering, Volume 79, Issue 4, April 2007, p. 1159-1165, ISSN 0260-8774
Keywords: **Cacao; Heat and mass transfer; Drying**

152. Participatory cocoa (*Theobroma cacao*) selection in Cameroon: Phytophthora pod rot resistant accessions identified in farmers' fields/M.I.B. Efombagn, ...[et.al.]
Crop Protection, Volume 26, Issue 10, October 2007, p. 1467-1473, ISSN 0261-2194
Keywords: **Phytophthora megakarya; Black pod; Leaf disc inoculation; Farmers' knowledge; Breeding; Participatory selection**
153. Why are there few seedlings beneath the myrmecophyte *Triplaris americana*?/Daniel M. Larrea-Alcazar, Javier A. Simonetti
Acta Oecologica, Volume 32, Issue 1, July-August 2007, p. 112-118, ISSN 1146-609X
Keywords: **Flower-fruit ratio; Helopeltis; Herbivory; Indonesia; Pollination; Phytophthora; Cacao yield**

TROPAG & RURAL

154. Assessment of sanitation and fungicide application directed at cocoa tree trunks for the control of Phytophthora black pod infections in pods growing in the canopy/ Opoku, I.Y; Akrofi, A,Y; Appiah, A,A
European Journal of Plant Pathology 2007; 117(2): p. 167-175
Keywords: ***Theobroma cacao*; Cocoa tree trunk; Fungicides; Phytophthora; Black pod**
155. Bird diversity in cacao farms and forest fragments of western Panama./ Bael, S.A-van. ...[et.al.]
Biodiversity and Conservation. 2007; 16(8): p. 2245-2256
Keywords: ***Theobroma cacao*; Biros; Diversity; Forests**

156. Contribution of cacao agroforests to the conservation of lower canopy ant and beetle diversity in Indonesia / Bos, M.M; Steffan Dewenter, I; Tscharntke
Biodiversity and Conservation. 2007; 16(8): p. 2429-2444
Keywords: Cacao; Agroforests; Beetle; Diversity; Conservation; Inomesis
157. Contribution of cocoa plantations to the conservation of native ants (Insecta: Hymenoptera: Formicidae) with a special emphasis on the Atlantic Forest fauna of southern Bahia, Brazil/ Delabie, J.H.C. ...[et.al.]
Biodiversity and Conservation. 2007; 16(8): p. 2359-2384
Keywords: Cocoa; Plantations; Ants; Insecta; Conservation; Formicidae
158. Diversity of insects captured by weaver spiders (Arachnida: Araneae) in the cocoa agroecosystem in Tabasco, Mexico./ Perez de la Cruz,-M. ...[et.al.]
Neotropical Entomology. 2007; 36(1): p. 90-101
Keywords: Cocoa agro ecosystem; Insects; Diversity; Araneae
159. Effect of cocoa bean origins on the palatability of chocolate./ Kasai, M ...[et.al.]
Nippon Shokuhin Kagaku Kogaku Kaishi = Journal of the Japanese Society for Food Science and Technology. 2007; 54(7): p. 332-338
Keywords: Cocoa beans; Palatability; Chocolate
160. Effects of intercropping with cowpea on field establishment of F3 Amazon cocoa seedlings and soil nutrient status/ Ndubuaku, U,M; Awolaja, S,O
Forests Trees and Livelihoods. 2007; 17(2): p. 169-177
Keywords: Theobroma cacao; Cowpea; Intercropping; Seedlings; Soil nutrient status

161. Ferns, frogs, lizards, birds and bats in forest fragments and shade cacao plantations in two contrasting landscapes in the Atlantic forest, Brazil/ Faria,-D. ...[et.al.]
Biodiversity and Conservation. 2007; 16(8): p. 2335-2357
Keywords: Cacao; Plantations; Fauna; Diversity
162. Financial analysis of shaded cocoa in Ghana / Obiri,-B-D. ...[et.al.]
Agroforestry Systems. 2007; 71(2): p. 139-149
Keywords: Cocoa; Financial analysis; Ghana
163. Foliar resistance of cacao (*Theobroma cacao*) to *Phytophthora palmivora* as an indicator of pod resistance in the field: the effect of light intensity and time of day of leaf collection/ Tahi,-G-M. ...[et.al.]
Plant Pathology. 2007; 56(2): p. 219-226
Keywords: *Theobroma cacao*; *Phytophthora palmivora*; Pod resistance; Light intensity
164. GC-MS detection of chiral markers in cocoa beans of different quality and geographic origin/ Caligiani,-A. ...[et.al.]
Chirality. 2007; 19(4): p. 329-334
Keywords: *Theobroma cacao*; Cocoa beans; Chiral markers; GC-MS detection quality; Geographic origin
165. Heritability of phenols in the resistance of *Theobroma cacao* against *Phytophthora megakarya*, the causal agent of black pod disease/ Djocgoue,-P-F. ...[et.al.]
Journal of Phytopathology. 2007; 155(9): p. 519-525
Keywords: *Theobroma cacao*; *Phytophthora megakarya*; Blch pod; Disease resistance; Phenols; Heritability
166. Incorporating livelihoods in biodiversity conservation: a case study of cacao agroforestry systems in Talamanca, Costa Rica/ Dahlquist,-R-M. ...[et.al.]
Biodiversity and Conservation. 2007; 16(8): p. 2311-2333
Keywords: Cacao agroforestry; Biodiversity; Nature conservation; Livelihoods

167. Labour cost as a correlate of output value in cocoa production: a case of Cocoa Research Institute of Nigeria (CRIN)/ Emaku,-L-A; Lawal,-J-O
Journal of Food, Agriculture and Environment. 2007; 5(2): p. 224-227
Keywords: **Cocoa; Production; Labour cost; Nigeria**
168. Learning to think for ourselves: knowledge improvement and social benefits among farmer field school participants in Cameroon/ David,-S
Journal of International Agricultural and Extension Education. 2007; 14(2): p. 35-49
Keywords: **Farmers; Knowledge; Social benefit; Field school participants; Cameroon**
169. Participatory cocoa (*Theobroma cacao*) selection in Cameroon: Phytophthora pod rot resistant accessions identified in farmers' fields/ Efombagn,-M-I-B.[et.al.]
Crop Protection. 2007; 26(10): p. 1467-1473
Keywords: ***Theobroma cacao*; Phytophthora; Podnrot; Disease resistance; Selection; Cmeroon**
170. Productivity of cacao impeded by epiphytes? An experimental approach./ Sporn,-S-G; Bos,-M-M; Gradstein,-S-R
Agriculture Ecosystems and Environment. 2007; 122(4): p. 490-493
Keywords: ***Theobroma cacao*; Productivity; Epiphytes**
171. Screening of cocoa types against Phytophthora pod rot disease/ Bhavani,-R; Koshy-Abraham; Reshma-Vijayaraghavan
International Journal of Agricultural Sciences. 2007; 3(2): p. 10-14
Keywords: ***Theobroma cacao*; Screening; Phytophthora; Pod rot**

172. Shade cacao plantations (*Theobroma cacao*) and bat conservation in southern Bahia, Brazil/Faria,-D; Baumgarten,-J
Biodiversity-and-Conservation. 2007; 16(2):p. 291-312
Keywords: ***Theobroma cacao*; Plantations; Bat; Wildlife conservation**
173. Spatial ecology and conservation of two sloth species in a cacao landscape in limon, Costa Rica/ Vaughan,-C. ...[et.al.]
Biodiversity and Conservation. 2007; 16(8): p. 2293-2310
Keywords: **Cacao; Spatial ecolosy; Nature conservation; Costa Rica**
174. Special issue: Biodiversity conservation in cocoa production landscapes/ Schroth,-G; Harvey,-C-A
Biodiversity and Conservation. 2007; 16(8): p. 2237-2444
Keywords: ***Theobroma cacao*; Cocoa; Production; Biodiversity conservation**
175. Study on the microflora and biochemistry of cocoa fermentation in the Dominican Republic / Galvez,-S-L. ...[et.al.]
International Journal of Food Microbiology. 2007; 114(1): p. 124-130
Keywords: **Cocoa; fermentation; Microflora; Biochemistry**
176. Traditional cocoa-based agroforestry and forest species conservation in Ondo State, Nigeria/ /Oke,-D-O; Odebiyi,-K-A
Agriculture, Ecosystems and Environment. 2007; 122(3): p. 305-311
Keywords: ***Theobroma cacao*; Agroforestry; Nature conservation; Nigeria**
177. Trichoderma stromaticum for management of witches' broom of cacao in Brazil / Pomella,-A-W-V. ...[et.al.]
Biological control: a global perspective. 2007; p. 210-217
Keywords: ***Theobroma cacao*; Trichoderma stromaticum; Witches broom; Brazil**

178. Twenty years of agronomic evaluation of wild cocoa trees (*Theobroma cacao* L.) from French Guiana / Lachenaud,-P. ...[et.al.]
Scientia Horticulturae. 2007; 113(4): p. 313-321
Keywords: *Theobroma cacao*; Wild species; Agronomic evaluation
179. Use of biogenerated atmospheres of stored commodities for quality preservation and insect control, with particular reference to cocoa beans /Navarro,-S ...[et.al.]
Bulletin OILB/SROP. 2007; 30(2): p. 197-204
Keywords: *Theobroma cacao*; Cocoa beans; Storage; Biogenerated atmospheres; Preservation; Insect control
180. Usefulness of epiphytic microflora from pod surface on the management of Phytophthora pod rot of cocoa/ Bhavani,-R; Koshy-Abraham; Reshma-Vijayaraghavan
International Journal of Plant Sciences Muzaffarnagar. 2007; 2(1): p. 178-183
Keywords: *Theobroma cacao*; Phytophthora; Pod rot; Epiphytic micro flora

BIBLIOGRAFI 2008

PROQUEST

181. Field performance of *Theobroma cacao* L. plants propagated via somatic embryogenesis/ Siela N Maximova ...[et.al.]
In Vitro Cellular & Developmental Biology: Plant Columbia:Nov/Dec 2008. Vol. 44, Iss. 6, p. 487-493
Keywords: *Theobroma cacao*; *Plant propagation*; *Somatic embryogenesis*

SCIENCECIRECT

182. Antibiosis, mycoparasitism, and colonization success for endophytic *Trichoderma* isolates with biological control potential in *Theobroma cacao*/B.A. Bailey, ...[et.al.]
Biological Control, Volume 46, Issue 1, Special Issue: Endophytes, July 2008, p. 24-35, ISSN 1049-9644
Keywords: *Trichoderma*; *Endophyte*; *Colonization*; *Theobroma cacao*; *Biocontrol*; *Antibiosis*; *Mycoparasitism*
183. Bacterial endophytes: *Bacillus* spp. from annual crops as potential biological control agents of black pod rot of cacao/ Rachel L. Melnick, ...[et.al.]
Biological Control, Volume 46, Issue 1, Special Issue: Endophytes, July 2008, p. 46-56, ISSN 1049-9644
Keywords: *Bacillus*; *Biological control*; *Induced systemic resistance*; *Phytophthora capsici*; *Pathogen*; *Theobroma cacao*

184. Bryophytes on tree trunks in natural forests, selectively logged forests and cacao agroforests in Central Sulawesi, Indonesia/Nunik S. Ariyanti, ...[et.al.]
Biological Conservation, Volume 141, Issue 10, October 2008, p. 2516-2527, ISSN 0006-3207
Keywords: **Bryophyte diversity; Drought tolerance; Canopy cover; Habitat change; Liverworts; Mosses; Tropical forest**
185. Colonization of cacao seedlings by Trichoderma stromaticum, a mycoparasite of the witches' broom pathogen, and its influence on plant growth and resistance/J.T. De Souza, ...[et.al.]
Biological Control, Volume 46, Issue 1, Special Issue: Endophytes, July 2008, p. 36-45, ISSN 1049-9644
Keywords: **Theobroma cacao; Trichoderma stromaticum; Witches' broom disease; Biological control; Endophytes; Colonization**
186. Drought response of Theobroma cacao (cacao) and the regulation of genes involved in polyamine biosynthesis by drought and other stresses/Hanhong Bae, ...[et.al.]
Plant Physiology and Biochemistry, Volume 46, Issue 2, February 2008, p. 174-188, ISSN 0981-9428
Keywords: **Theobroma cacao; Trichoderma stromaticum; Witches' broom diseases; Biological control**
187. Endophytic fungi as biocontrol agents of Theobroma cacao pathogens/Luis C. Mejia, ...[et.al.]
Biological Control, Volume 46, Issue 1, Special Issue: Endophytes, July 2008, p. 4-14, ISSN 1049-9644
Keywords: **Biological control; Endophytic fungi; Theobroma cacao; Moniliophthora; Phytophthora; Crinipellis; Colletotrichum; Clonostachys; Botryosphaeria**

188. Impact of environmental factors, chemical fungicide and biological control on cacao pod production dynamics and black pod disease (*Phytophthora megakarya*) in Cameroon/P. Deberdt, ...[et.al.] *Biological Control*, Volume 44, Issue 2, February 2008, p. 149-159, ISSN 1049-9644
Keywords: Black pod disease; Cocoa; *Theobroma cacao*; Epidemiology; Fungicide; *Phytophthora megakarya*; Microbial control; *Trichoderma asperellum*; Monitoring
189. Molecular characterisation of fungal endophytic morphospecies associated with the indigenous forest tree, *Theobroma gileri*, in Ecuador/Sarah E. Thomas, ...[et.al.] *Mycological Research*, Volume 112, Issue 7, July 2008, p. 852-860, ISSN 0953-7562
Keywords: Agaricomycotina; Basidiomycota; Biological control; Cocoa; Endophyte; Phytopathogens; rDNA phylogeny; *Theobroma cacao*
190. Phenolic content and antioxidant capacity of hybrid variety cocoa beans/ W.A. Jonfia-Essien, ...[et.al.] *Food Chemistry*, Volume 108, Issue 3, 1 June 2008, p. 1155-1159, ISSN 0308-8146
Keywords: Cocoa beans; Hybrid varieties; Antioxidants; Phenolics
191. Roasting impact on the contents of clovamide (N-caffeooyl-L-DOPA) and the antioxidant activity of cocoa beans (*Theobroma cacao* L.)/Marco Arlorio, ...[et.al.] *Food Chemistry*, Volume 106, Issue 3, 1 February 2008, p. 967-975, ISSN 0308-8146
Keywords: *Theobroma cacao*; (-)-N-(3'-4'-dihydroxy-(E)-cinnamoyl)-dihydroxyphenylalanine; Clovamide; Antioxidant properties; Cocoa astringency

192. Trichoderma martiale sp. nov., a new endophyte from sapwood of *Theobroma cacao* with a potential for biological control/Rogerio E. Hanada, ...[et.al.]
Mycological Research, Volume 112, Issue 11, November 2008, p. 1335-1343, ISSN 0953-7562
Keywords: Brazil; Black pod disease; Cacao; Diversity; Hypocreales; New species; Phytophthora; Plant disease; Systematics

INDEKS

A

ACCUMULATION, 1
ACIDITY, 43
ACTINOMYCETES, 46
ADOPTION, 8, 13
AFLATOXIN, 24
AGAMOUS, 44
AGRICULTURAL CHEMICALS, 8
AGROFORESTRY, 13, 14, 20, 32, 52, 56
ALBIZIA, 39
ALBUMIN, 21
ALMONDS, 11
AMARYLLIDACEAE, 30
AMINO ACIDS, 9
ANALYTICAL METHODS, 30
ANGIOSPERMS, 9
ANTAGONISM, 42
ANTHOCYANINS, 42
ANTIFUNGAL ACTIVITY, 26
ANTIOXIDANT, 6, 23, 48, 61
ANTIOXIDANT ACTIVITY, 6
ANTIOXIDANTS, 30, 61
ANTIRADICAL, 23
APOPTOSIS, 49
APPLICATION EFFICIENCY, 7
APPLICATION RATES, 30
AROMA, 9
ARTHROPOD, 18
ARTISANAL FISHERY, 26
ASCORBATE, 49

B

BACILLUS THURINGIENSIS, 1
BAHIA, 10, 51, 55
BASIDIOMYCOTA, 48, 60
BEAN QUALITY, 17
BEAUVERIA BASSIANA, 19
BELIZE, 20, 32, 36
BIOCHEMICAL, 17

BIOCONTROL, 26, 44, 58
BIODIVERSITY HOTSPOT, 7
BIOLOGICAL ACTIVITY, 4
BIOLOGICAL CONTROL, 27, 42, 56,
58, 59, 60
BIOLOGICAL CONTROL AGENTS, 27

BIOLOGICAL DIVERSITY, 37
BIOLOGICAL VALUE, 21
BIOSYNTHESIS, 1
BITERTANOL, 27
BITTERNESS, 9
BLACK POD, 46
BLACK POD, 15, 20, 25, 42, 49, 50, 51,
60, 61
BLACK POD AREAS, 15
BLACK POD DISEASE, 20, 25, 60, 61
BRAZIL, 4, 10, 17, 22, 26, 51, 52, 55, 56,
61
BRAZILIAN ATLANTIC FOREST, 7
BREAKAGE, 9
BREEDING, 31, 38, 48, 50
BREEDING STRATEGIES, 31
BREEDING TOOL, 48
BULBS, 30
BY PRODUCT, 4

C

CABRUCA, 7
CACAO, 2, 3, 4, 10, 18, 20, 21, 22, 24,
25, 27, 31, 32, 38, 47, 48, 49, 50, 51,
52, 53, 55, 61
CACAO LIQUOR EXTRACT, 2

- CACAO RHEOLOGICAL PROPERTIES, 29
- CAFFEINE, 10
- CAMELLIA, 30
- CAMELLIASINENSIS, 30
- CAMEROON, 3
- CANOPY, 7, 59
- CARDIOVASCULAR, 23, 41
- CARDIOVASCULAR DISEASE, 41
- CARRAGEENAN, 29
- CASH CROPS, 8
- CATECHIN, 10
- CHEMICAL COMPOSITION, 9, 11, 30
- CHEMICAL CONTROL, 27
- CHEMICAL HEPATOCARCIUS GENESIS, 2
- CHITINASE GENE, 40
- CHLOROPHYLL, 10
- CHOCOLATE, 5, 6, 13, 15, 18, 23, 41, 52
- CHOCOLATE FOREST, 13
- CHORDATA, 30
- CLONE, 18
- CLONES, 4, 28, 33, 35, 40
- CLONOSTACHYS BYSSICOLA, 27
- CLONOSTACHYS SPP, 42
- COCOA, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 22, 25, 27, 28, 29, 30, 31, 32, 34, 35, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54, 55, 56, 57, 60, 61
- COCOA BLACK POD, 3, 14
- COCOA POD BORER, 1
- COCOA PRODUCTION, 15
- COCOA PRODUCTS, 11, 12
- COCOA SUSTAINABILITY, 14
- COEFFICIENT OF PARENTAGE, 27
- COFFEE, 13, 18, 30, 46
- COLLECTION, 14
- COLLETOTRICHIUM GLOEOSPAINOIDS, 40
- COLOMBIA, 28
- COMBINATIONS ABILITY, 35
- CONE ANGLE, 7
- CONE NOZZLE, 7
- CONE NOZZLES, 47
- CONOPOMORPHA CRAMERELLA, 40
- CONTROL, 15, 24, 42, 49, 58, 59, 60
- COPPER, 48
- COPPERHYDROXIDE, 27
- CORRELATION ANALYSIS, 8
- CRIMPELLIS PERMICIOSA, 16, 17
- CRINIPELLIS PERNICIOSA, 8, 16, 17, 26, 28, 38, 43
- CROP PRODUCTION, 8, 25, 29
- CROP YIELD, 29
- CROPPING SYSTEM, 15
- CRYOPRESERVATION, 2, 6
- CULTIVARS, 10
- D**
- DAIRY PRODUCTS, 24
- DATE PALM, 15
- DEFORESTATION, 43
- DEGRADATION, 1
- DESIGN, 9, 13
- DESSERTS, 29
- DEVELOPMENTAL EXPRESSION, 24
- DICOTYLEDONS, 9
- DIETARY FIBRE, 48
- DIFENTHRIN, 18
- DISEASE RESISTANCE, 8, 28, 29, 35, 36, 38, 40, 46, 48, 53, 54
- DISEASE RESISTANT, 27
- DISEASES, 14, 17, 18
- DIVERSIFICATION, 8
- DROPLET SIZE SPECTRA, 7
- E**
- EARTHWORMS, 48
- ELASMOBRANCHII, 26
- ELECTROPHORETIC CHARACTERISTIC, 45
- ELECTROPHORETIC KARYOTYPE, 43
- ELISA, 24
- ENCAPSULATION DEHYDRATION, 6
- ENDOPHYTE, 19, 58, 60
- ENDOPHYTIC ISOLATES, 37

ENTOMOPATHOGEN, 19
EPICATECHIN, 10
EPIDEMOLOGY, 6, 8, 60
EPIPHYTE, 15
ESTRUS, 5
ETHYLENE, 20, 25
EXPLANTS, 35
EXPORT COMMODITY PRODUCTION, 13

F

FARM MACHINERY, 9
FARMERS, 14, 50, 54
FARMINPUTS, 8
FATTY ACIDS, 11
FEED INTAKE, 5
FEEDING, 4
FERMENTATION, 5, 43, 45
FERTILIZER, 15
FINGER PRINTING, 3
FLAVONOID, 41
FLAVONOIDS, 19
FLAVOUR, 9
FLAVOUR COMPOUNDS, 9
FLONSTIX DIVERSITY, 46
FLOWER DEVELOPMENT, 44
FLUORESCENCE, 10
FLUTOLANIL, 27
FOOD CONTAMINATION, 12
FOREST CONSERVATION, 13
FORMATION, 9
FROOTY POD ROT, 17
FROSTY POD DISEASE, 26
FROSTY POD ROT, 36, 42, 46
FRUITS, 1, 30
FUNCTIONAL PROPERTIES, 30
FUNCTIONAL FOOD, 48
FUNGAL, 8, 11, 19, 28, 29, 37, 39
FUNGAL DISEASES, 8, 11, 28, 29
FUNGAL ENDOPHYTIC MORPHOSPECIES, 39
FUNGAL SPORES, 28
FUNGICIDE, 7, 15, 48, 60
FUNGICIDES, 27, 51

FUSARIUM, 37

G

GALLIC ACID, 10
GAS EXCHARGE, 34
GELS, 29
GENE ANALOGS, 1
GENE CLONING, 24
GENE EXPRESSION, 24, 25
GENE EXPRESSION, 37
GENE FAMILY, 24
GENE MAPPING, 21
GENERALIZED LINEAR MIXED MODEL, 6
GENES, 8
GENETIC DIVERSITY, 4, 17, 27, 32, 37, 38
GENETIC MAPPING, 1
GENETIC VARIATION, 11, 28
GENOMIC RESOURCES, 1, 2
GENOTYPES, 8, 10, 28, 35, 36
GERMPLASM, 8, 33
GHANA, 10, 15, 31, 32, 33, 52
GLOBULINS, 45
GROWTH, 10, 29

H

HABITAT HETEROGENEITY, 7
HEAT AND MASS TRANSFER, 50
HEAT TREATMENT, 29
HEMIPTERA, 4
HERITABILITY, 29, 53
HISTORICAL REVIEW, 13
HORTICULTURAL CROPS, 8
HUMID TROPICS, 48
HYDROCREA, 44
HYPHAE, 28
HYPHOMYCETES, 12, 27

I

IDENTIFIERS, 10, 12
IDENTIFIERS ANTIOXIDANT PROPERTIES, 10

IMIDACLOPRID, 18
IN VITRO CULTURE, 2
INCUBATION, 36
INDUCED CHIMERISM, 2
INDUCED RESISTANCE, 25
INFECTION, 28
INFILTRABILITY, 43
INHIBITOR, 21
INNOVATION ADOPTION, 8
INOCULATION, 8
INSECT CONTROL, 27, 57
INSECT PESTS, 27
INTEGRATED DISEASE
 MANAGEMENT, 48
INTEGRATED PEST
 MANAGEMENT, 20
INTENSIFICATION, 8
INTENSIVE CROPPING, 8
INTERGENIC DNA, 11
INTERNATIONAL COCOA
 GENEBANK, 17
INTERNATIONAL MOLECULAR
 STANDARD, 3
INTRASPECIFIC GENETIC
 VARIABILITY, 43
ISOLATION, 39, 44, 46, 49
ISOZYME ELECTROPHORESIS, 17
ITALY, 12

L

LACTATION, 5
LAND COVER CHANGE, 43
LAND USE, 32
LANDUSE, 20
LARVAE, 1
LEAF AGE, 36
LEAF DISCINOCULATION, 36
LEAF MERISTEMS, 28
LEAVES, 10, 18, 28
LIGHT, 10, 53
LIGHTRELATIONS, 10
LINKED MAP, 3
LINOLEIC ACID, 11
LITTER TRAITS, 5

LOW PRESSURE, 13

M

MAJOR ASPARTIC PROTEINOSE, 19
MALAYSIA, 10, 15
MALVALES, 9
MAMMALS, 30
MANUAL SPRAYERS, 7
MARKETS, 14
MEAL, 4
MEDIATORS, 19
MEDICINAL PLANTS, 10
METHODOLOGY, 8, 11
METHYL JASMONATE, 25
MEXICO, 46, 52
MICROBIOLOGY, 5, 56
MICROSATELITE ALELO, 21
MICROSATELLITE PRIMERS, 43
MICROSATELLITE
 TRANSFERABILITY, 38
MICROZATELLITE MARKER, 3
MILK CHOLLATA, 5
MILK POWDER, 5
MILKFAT, 29
MODELING, 20
MOISTURE CONTENT, 9
MOLASSES, 42
MOLECULAR CHARACTERIZATION,
 39
MOLECULAR DIVERSITY, 16
MOLECULAR MARKERS, 27
MOLECULAR PHYLOGENY, 24
MONILIOPHTHORA PERNICIOSA, 44,
 47, 48, 49
MONILIOPHTHORA RORERI, 17, 26,
 27, 28, 36, 42, 44, 46
MONILIOPHTHORARORERI, 27
MONOCULTURE, 8, 13
MORPHOLOGICAL BEAN TRAITS, 22
MYCELIAL GROWTH, 21
MYCELIUM, 28
MYCOPARASITE, 37, 49
MYCOPARASITISM, 42, 58

N

- NARCISSUS, 30
NECROTROPHIC, 44
NEP1, 24
NIGERIA, 33, 54, 56
NITROGEN VALUE, 39
NONILROPHTHORA RORERI, 36
NUCLEOTIDE SEQUENCES, 11
NUTRITIONAL PROPERTIES, 48

O

- OCHRA TOXINS, 12
OCHRATOXIN A. ASPERGILLUS, 12
OIL EMULSION, 6
OLEIC ACID, 11
ORGANOLEPTIC CHARACTERISTICS, 14
OXATHIIN FUNGICIDES, 27

P

- PACKAGING, 45
PALMITICACID, 11
PAPUA NEW GUINEA, 31
PARTICIPATORY SELECTION, 50
PASSIUM PHOSPHATE, 22
PASSIUM SILICATE, 22
PASTURE, 43
PATHOGENICITY, 28
PATHOGENS, 21
PELARGONIC ACID, 26
PENICILLIUM, 12
PERONOSPOROMYCETES, 29
PERU, 38
PESK, 13
PEST CONTROL, 27
PESTICIDE DEPOSITION, 7
PHARMACOLOGY, 10
PHENOLICS, 23, 61
PHYSICAL MAPPING, 1, 2
PHYSICAL PROPERTIES, 9
PHYSICOCHEMICAL PROPERTIES, 11

PHYSIOLOGICAL

- CHARACTERISTIC, 33
PHYTOPAHTHORA SPP, 4
PHYTOPHTHORA, 3, 4, 6, 11, 14, 20, 22, 24, 25, 36, 40, 42, 46, 48, 49, 50, 51, 53, 54, 55, 57, 58, 60, 61

PHYTOPHTHORA MEGAKARYA, 3, 6, 14, 20, 24, 25, 49, 50, 53, 60

PHYTOPHTHORA PALMIVORA, 36

PHYTOSANITARY POD REMOVAL, 6

PIRIMIPHOSMETHYL, 18

PLANT CUTICLE, 28

PLANT DEFENSE, 24

PLANT DISEASES, 8, 11, 28, 29

PLANT EXTRACTS, 10

PLANT FATS, 11

PLANT PATHOGENIC FUNGI, 8, 11, 28, 29

PLANT PATHOGENS, 8, 11, 28, 29

PLANT PATHOLOGY, 48

PLANT PESTS, 27

PLANT PHYSIOLOGY, 29

PLANTING DENSITY, 32, 33

PLANTS, 9

POD BORER, 40

POD ROT, 36, 40, 46, 55, 57

PODDY, 15

PODS, 28, 29

POLLINATION, 8, 50

POLYMENZATION, 38

POLYPHENOLIC COMPOUNDS, 42

POLYPHENOLS, 9, 10, 30, 43

POPULATION BIOLOGY, 26

POPULATION STRUCTURE, 38

POSTHARVEST, 45

PREPATENT PERIOD, 8

PRINCIPAL COMPONENTS

ANALYSIS, 42

PROCYANIDINS, 38, 47

PRODUCTION, 3, 20, 31, 32, 54, 55

PROGENY, 8, 47

PROPYLENEOXIDE, 30

PROTECTED CULTIVATION, 8

PROTEIN, 21

PRUNING RESIDUES, 39

PULSED FIELD GEL
ELECTROPHORESIS, 43
PURIFICATION, 38
PYRAZINES, 9

Q

QUALITY, 5, 45

R

RAPD MARKERS, 4
REDUCING SUGARS, 9
REPRODUCTIVE SEASONALITY, 26
RESISTANCE, 1, 21, 22
RHIZOPRIONODON LALANDII, 26
RIBOSOMA LRNA, 11
ROASTING, 9, 61
ROOTSTOCK, 15
RUBIALES, 30
RUNOFF GENERATION, 43
RURAL DEVELOPMENT, 13

S

SALICYLIC ACID, 44
SATURATED HYDRAULIC CONDUCTIVITY, 43
SCREENING, 8, 55
SEASONALITY, 7
SECONDARY FOREST, 43
SEEDLING, 37
SEEDLINGS, 21, 22, 52
SEEDS, 19, 42
SEGREGATION, 8
SELECTION, 3, 22, 33, 36, 54
SENSORY EVALUATION, 39, 45
SHADED, 20
SHADING, 32, 39
SHLBERGELLA SINGULARIS, 4
SHOOTS, 10, 29
SIMPLE SEQUEMENTE REPEAT, 2
SIMULATION MODELS, 25, 29
SMALLHOLDER AGRICULTURE, 40
SOCIOECONOMICS, 8
SODIUM CHLORIDE, 15

SOMATIC EMBRYOGENESIS, 35, 58
SOMATIC EMBRYOS, 6
SORPTION, 30
SOWS, 5
SPERMATOPHYTA, 9
SPORE GERMINATION, 21
SPRAYING, 47
STAY FRESH, 23
STEMS, 10
STERCULIACEAE, 9
STORAGE, 45, 57
SUCROS, 25
SUCROSE, 6, 29
SUPERCritical CO₂ EXTRACTION, 23
SURVIVAL, 13
SUSCEPTIBILITY, 24
SYSTEMIC INDUCED SUSCEPTIBILITY, 44

T

TASTE, 39
TECHNIQUES, 11
TEMPERATURE, 10
THEACEAE, 30
THEALES, 30
THEOBROMA, 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61
THEOBROMA CACAO, 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61
THEOBROMINE, 1
THERMO-RESISTANT CHOCOLATE, 41
TOXINS, 1
TREE CROPS, 15
TRIADIMENOL COSTA RICA, 27

TRICHODERMA, 21, 26, 27, 37, 42, 44,
49, 56, 58, 59, 60, 61
TRICHODERMA ASPERELLUM
INSECTS, 27
TRICHODERMA HARZIANUM, 21, 26
TRINIDAD, 17, 32, 40, 46
TRITICUM ESTIVUM, 30
TROPICAL DEFORESTATION, 13
TUMOR MARKER ENZYMES, 2

V

VARIABILITY, 22, 31
VARIETAL REACTIONS, 10
VEGETABLES, 30
VERTEBRATES, 30
VERTICILLIUM DAHLIAE, 22
VIETNAMESE, 18
VISOUR, 33

W

WASPS, 7
WATER RELATIONS, 34
WHEY PROTEIN, 29
WILD COCOA, 22
WILD GUIANAN COCOA, 17
WITCHES BROOM DISEASE, 27
WITCHES' BROOM DISEASE, 26, 59
WITCHES' BROOM, 18, 59
WITCHES'BROOM DISEASE, 20, 21
WITCHES'BROOMS, 8
WITCHES BROOM, 17
WOUNDING, 25

Y

YIELD, 29, 31, 47
YIELD FACTORS, 29