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Keywords : Corn flour; Potato flour; Physicochemical; Morphological; Thermal; Rheological; Texture analysis; Cookies

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Rheological evaluation of non-Newtonian Mexican nixtamalised maize and dry processed masa flours/ M. C. Nunez-Santiago, E. Santoyo, L. A. Bello-Perez, S. Santoyo-Gutierrez
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Keywords : Corn; Dipping solution; Drying; Ethyl oleate; Colour; Activation energy

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Keywords : Wheat; Maize; Asymmetric somatic hybridization; Nuclear genome; Cytogenome; Integration

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Keywords : Raphanus sativus L.; Zea mays L.; Cadmium; Zinc; Complexes; Phytochelatins

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Keywords : Fructokinase (FRK); Days after pollination (DAP); Hexokinase (HXK)

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Keywords : Corn silage; Digestion; Energy; Neutral detergent fiber; Starch; Dairy cattle

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Keywords : Near-infrared reflectance spectroscopy; Forage quality; Net energy; Crude protein; Forage maize

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Keywords : Adoption; Agroforestry; *Gliricidia sepium*; Logit; Malawi

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Keywords : *Acetobacter diazotrophicus*; Amylase; Cellulase; *Gluconacetobacter diazotrophicus*; Nitrogen fixation

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Keywords : Corn stover; Pretreatment; Aqueous ammonia; Enzymatic hydrolysis; Lignin; Hemicellulose

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Keywords : Coproducts; Corn gluten meal; Corn gluten feed; Corn wet milling; Chemical composition

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Keywords : Oxidative stress; Reactive oxygen species (ROS); Tocopherols; Zea mays

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Keywords : C4 photosynthesis; Chilling; Maize; Kranz anatomy; Short distance transport; Zea mays

Maize as food and feed in intensive smallholder systems: management options for improved integration in mixed farming systems of east and southern Africa/ D. L. Romney, P. Thorne, B. Lukuyu, P. K. Thornton

Field Crops Research, Volume 84, Issues 1-2, Approaches to improve the utilization of food-feed crops, October-November 2003, Pages 159-168

Keywords : Maize; Forage; Crop-livestock integration; Modelling; Dairy; Smallholder intensive systems

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Keywords : Tortilla chips; Consumer testing; Descriptive analysis; Preference modeling; Proportional odds models

Quality characteristics of low fat ostrich meat patties formulated with either pork lard or modified corn starch, soya isolate and water/ L. C. Hoffman, F. D. Mellett

Meat Science, Volume 65, Issue 2, October 2003, Pages 869-875

Keywords : Ostrich; Muscle class; Processing

Simulation of the impact of subsoil compaction on soil water balance and crop yield of irrigated maize on a loamy sand soil in SW Spain/ F. Moreno, E. J. Murer, E. Stenitzer, J. E. Fernandez, I. F. Giron

Soil and Tillage Research, Volume 73, Issues 1-2, Experiences with the Impact and Prevention of Subsoil Compaction in the European Union, October 2003, Pages 31-41

Keywords : Subsoil compaction; Simulation model; Irrigation; Water balance; Maize; Root length density

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Keywords : Soil compaction; Field experiment; Maize yield; Root length density; Soil water model; Crop growth

Effect of acid-alcohol treatment on the molecular structure and physicochemical properties of maize and potato starches/ Jheng-Hua Lin, Shyh-Yang Lee, Yung-Ho Chang

Carbohydrate Polymers, Volume 53, Issue 4, 1 September 2003, p. 475-482

Keywords : Starch; Acid-alcohol treatment; High-performance size exclusion chromatography

Constitutive analysis of the nonlinear viscoelastic properties of cellulosic fiber gels produced from corn or oat hulls/ C. J. Carriere, G. E. Inglett
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Keywords : Rheology; Constitutive analysis; Flour; Nonlinear viscoelasticity

Effect of thermomechanical treatment on the rheological properties of crosslinked waxy corn starch/ M. Nayouf, C. Loisel, J. L. Doublier
Journal of Food Engineering, Volume 59, Issues 2-3, Sept. 2003, p. 209-219

Keywords : Crosslinked waxy maize starch; Rheological properties; High temperature; High shear rate

Correlations for shrinkage, density and diffusivity for drying of maize and green peas in a fluidized bed with energy carrier/ M. S. Hatamipour, D. Mowla

Journal of Food Engineering, Volume 59, Issues 2-3, Sept. 2003, p. 221-227

Keywords : Fluidized drying; Diffusivity; Shrinkage; Inert material; Density; Green peas; Maize

Effect of slow release urea supplementation on fattening of steers fed sugar cane tops (*Saccharum officinarum*) and maize (*Zea mays*): ruminal fermentation, feed intake and digestibility/ M. A. Galina, F. Perez-Gil, R. M. A Ortiz, J. D. Hummel, R. E. Orskov

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Keywords : Beef cattle fattening; Non-protein nitrogen supplementation; Fermentation; Maize; Nutrition; Corn stubble; Sugar tops

The pea (*Pisum sativum* L.) rbcS transit peptide directs the *Alcaligenes eutrophus* polyhydroxybutyrate enzymes into the maize (*Zea mays* L.) chloroplasts/ Heng Zhong, Farzaneh Teymouri, Brad Chapman, Shahina Bano Maqbool, Robab Sabzikar, Yahia El-Maghraby, Bruce Dale, Mariam B. Sticklen

Plant Science, Volume 165, Issue 3, September 2003, Pages 455-462

Keywords : Chloroplasts; Maize transformation; PHB; rbcS transit peptide

The pck1 promoter from *Urochloa panicoides* (a C4 plant) directs expression differently in rice (a C3 plant) and maize (a C4 plant)/ Shoichi Suzuki, James N. Burnell

Plant Science, Volume 165, Issue 3, September 2003, Pages 603-611

Keywords : C4; PCK; Photosynthetic genes; Transgenic rice; Promoter; Urochloa panicoides

Involvement of abscisic acid in leaf and root of maize (*Zea mays* L.) in avoiding chilling-induced water stress/ Ricardo Aroca, Paolo Vernieri, Juan Jose Irigoyen, Manuel Sanchez-Diaz, Franco Tognoni, Alberto Pardossi

Plant Science, Volume 165, Issue 3, September 2003, Pages 671-679

Keywords : Abscisic acid; Acclimation; Chilling; Leaf conductance; Maize; Root hydraulic conductance

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Keywords : ¹³C; Carbon dioxide; Carbon turnover; Dissolved organic carbon; Incubation; Microbial biomass; Microcosm; Soil organic carbon

The replacement value of sorghum and maize with or without supplemental enzymes for rice in extruded dog foods/ L. N. Twomey, J. R. Pluske, J. B. Rowe, M. Choct, W. Brown, D. W. Pethick

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Keywords : Sorghum; Maize; Rice; Dog; Enzyme supplementation; Faecal quality

Nitrogen dynamics and budgets in a winter wheat-maize cropping system in the North China Plain/ Xuejun Liu, Xiaotang Ju, Fusuo Zhang, Jiarong Pan, Peter Christie

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Keywords : Winter wheat-maize cropping; NO₃-N accumulation and leaching; Gaseous N losses; N budgets; China

Structural features and potential texturising properties of lemon and maize cellulose microfibrils/C. Rondeau-Mouro, B. Bouchet, B. Pontoire, P. Robert, J. Mazoyer, A. Buleon

Carbohydrate Polymers, Volume 53, Issue 3, 15 August 2003, Pages 241-252

Keywords : Structure; Cellulose microfibrils; Lemon; Maize; Texturising properties

Potential Use of Nitrogen Reflectance Index to estimate Plant Parameters and Yield of Maize/ Kenan Diker, Walter C. Bausch

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Fall Armyworm Damaged Maize Plant Identification using Digital Images/ D. G. Sena Jr, F. A. C. Pinto, D. M. Queiroz, P. A. Viana

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Biosystems Engineering, Volume 85, Issue 4, August 2003, Pages 455-460

Sequential sampling plans for estimating European corn borer (Lepidoptera: Crambidae) and corn earworm (Lepidoptera: Noctuidae) larval density in sweet corn ears/ Patrick K. O'Rourke, W. D. Hutchison

Crop Protection, Volume 22, Issue 7, August 2003, Pages 903-909

Keywords : Ostrinia nubilalis; Helicoverpa zea; Sweet corn; Resistance monitoring; Sequential sampling; Resampling software

Bioassays to compare the systemic activity of three neonicotinoids for control of Heteronychus arator Fabricius (Coleoptera: Scarabaeidae) in maize/ T. W. Drinkwater

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Keywords : Acetamiprid; Heteronychus arator; Imidacloprid; Neonicotinoids; Thiamethoxam

Transpiration and nutrient uptake dynamics in maize (*Zea mays* L.)/ Viliam Novak, Jozef Vidovic

Ecological Modelling, Volume 166, Issues 1-2, 1 August 2003, Pages 99-107

Keywords : Nitrogen; Phosphorus; Potassium; Transpiration; Modeling

Control of preharvest aflatoxin contamination in maize by pyramiding QTL involved in resistance to ear-feeding insects and invasion by *Aspergillus* spp./ N. W. Widstrom, A. Butron, B. Z. Guo, D. M. Wilson, M. E. Snook, T. E. Cleveland, R. E. Lynch

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Keywords : Aflatoxin; Aspergillus infection; Husk tightness; Maysin; Resistance to insects; Pyramiding QTL; Zea mays L.

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Keywords : Reflectance measurements; Corn; Nitrogen deficiency; Crop N monitoring

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Keywords : Sasakawa; Technology transfer; Maize; Agricultural inputs; Ethiopia; Mozambique; Financial analysis; Economic analysis

The influence of diets containing either conventional corn, conventional corn with choice white grease, high oil corn, or high oil high oleic corn on belly/bacon quality/ G. Rentfrow, T. E. Sauber, G. L. Allee, E. P. Berg

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Keywords : Belly; Bacon; Corn-type; Fatty acid profile

A dehydrotrimer of ferulic acid from maize bran/ Xavier Rouau, Veronique Cheynier, Anne Surget, Damien Gloux, Cecile Barron, Emmanuelle Meudec, Jean Louis-Montero, Marc Criton

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Keywords : Zea mays L.; Maize; Bran; Phenolic acid; Ferulic acid trimer

ZmPUMP encodes a maize mitochondrial uncoupling protein that is induced by oxidative stress/ Marcos Brandalise, Ivan de Godoy Maia, Jiri Borecky, Anibal Eugenio Vercesi, Paulo Arruda

Plant Science, Volume 165, Issue 2, August 2003, Pages 329-335

Keywords : Plant uncoupling mitochondrial protein; Mitochondria; Oxidative stress; Maize

Water use in a *Grevillea robusta*-maize overstorey agroforestry system in semi-arid Kenya/ J. E. Lott, A. A. H. Khan, C. R. Black, C. K. Ong

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Keywords : Agroforestry; Grevillea robusta; Kenya; Maize; Sap flow; Water use

GRAAL: a model of GRowth, Architecture and carbon ALlocation during the vegetative phase of the whole maize plant: Model description and parameterization/ J. -L. Drouet, L. Pages

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Keywords : Carbon allocation dynamics; Maize; Object-oriented model; Organ development; Organ to whole plant integration; Plant architecture; Source-sink relationships

White muscle free amino acid concentrations following feeding a maize gluten dietary protein in Atlantic salmon (*Salmo salar* L.)/ Eleni Mente, Simeon Deguara, Maria Begona Santos, Dominic Houlihan

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Keywords : Maize gluten; Free amino acids; Atlantic salmon

Effect of extrusion of wheat and corn on gilthead sea bream (*Sparus aurata*) growth, nutrient utilization efficiency, rates of gastric evacuation and digestive enzyme activities/ B. Venou, M. N. Alexis, E. Fountoulaki, I. Nengas, M. Apostolopoulou, I. Castritsi-Cathariou

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Keywords : Extrusion-wheat-corn; Growth-nutrient utilization; Digestibility; Gastric evacuation; Trypsin-amylase; Sparus aurata

Methodological limitations and N-budget differences among a restored tallgrass prairie and maize agroecosystems/ K. R. Brye, J. M. Norman, S. T. Gower, L. G. Bundy

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Keywords : Nitrogen budget; Tallgrass prairie; Maize; Agroecosystems; Wisconsin

Occurrence of *Danaus plexippus* L. (Lepidoptera: Danaidae) on milkweeds (*Asclepias syriaca*) in transgenic Bt corn agroecosystems/ Laura C. H. Jesse, John J. Obrycki

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Keywords : Danaus plexippus; Bt corn; Risk assessment; Asclepias syriaca; Transgenic insecticidal crop

Trends in maize, rice, and wheat yields for 188 nations over the past 40 years: a prevalence of linear growth/ Sasha Hafner

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Keywords : Cereal yields; Trends; Linear; Quadratic; National; Global

Seasonal changes in nitrification potential associated with application of N fertilizer and compost in maize systems of southwest Michigan/ A. Fortuna, R. R. Harwood, G. P. Robertson, J. W. Fisk, E. A. Paul
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Keywords : Nitrification potential; Plant biomass to plant N content (PB:N); N mineralization; Compost; Cover crops; Crop rotations; Michigan

Effect of rotational fallows on abundance of soil insects and weeds in maize crops in eastern Zambia/ G. Sileshi, P. L. Mafongoya
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Keywords : Diaecoderus; Maize yield; Mixed fallows; Termites; Soil nutrients; Weeds

Changes in the microstructure of wheat, corn and potato starch granules during extraction of non-starch compounds with sodium dodecyl sulfate and mercaptoethanol/ W. Blaszczyk, S. Valverde, J. Fornal, R. Amarowicz, G. Lewandowicz, K. Borkowski
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Keywords : Starch granule; Amylose; Amylopectin; Surface compounds; Structural study

Tropicalxtemperate germplasm resistant to corn earworm (Lepidoptera: noctuidae)/ Wenwei Xu, Linda Pollak, E. D. Bynum Jr
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Keywords : Corn earworm; Helicoverpa zea; Gernplasm; Plant resistance; Zea mays

Response of maize (*Zea mays* L.) genotypes to excess soil moisture stress: morpho-physiological effects and basis of tolerance/ Pervez H. Zaidi, S. Rafique, N. N. Singh
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Keywords : Excess soil moisture; Waterlogging; Growth; Alcohol dehydrogenase activity; Transpiration

Production of cellulolytic and xylanolytic enzymes by *Fusarium oxysporum* grown on corn stover in solid state fermentation/ Gianni Panagiotou, Dimitris Kekos, Basil J. Macris, Paul Christakopoulos

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Keywords : Corn stover; Fusarium oxysporum; Solid state culture; Xylanases; Cellulases

Improved methods for decolorizing corn zein/ David J. Sessa, Fred J. Eller, Debra E. Palmquist, John W. Lawton

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Keywords : Zein; Supercritical and subcritical fluid extractions; Ultrafiltration/diafiltration; Column chromatography; Activated carbon; Colorimetric assay

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Keywords : Corn; Maize; Milling; Processing; Separations; Wet milling

Minimizing entrainment of extract liquid by settling maize particles/ L. C. Dickey, A. McAloon, N. Parris

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Keywords : Maize; Extraction; Ethanol; Solvent recovery; Settling associated entrainment; Zein

Digestion of maize and sunflower pollen by the spotted maize beetle *Astylus atromaculatus* (Melyridae): is there a role for osmotic shock?/ H. Human, S. W. Nicolson

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Keywords : Zea mays; Poaceae; Maize; Development; Cell wall; Ferulates

Aberrant processing of a Maize GALACTINOL SYNTHASE transcript is caused by heat stress/ Tian-Yong Zhao, Robert B. Meeley, Bruce Downie
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Keywords : Aberrant processing; Heat stress; Seeds; Maize

No-tillage, crop residue additions, and legume cover cropping effects on soil quality characteristics under maize in Patzcuaro watershed (Mexico)/ A. Roldan, F. Caravaca, M. T. Hernandez, C. Garcia, C. Sanchez-Brito, M. Velasquez, M. Tiscareno

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Keywords : Microbial biomass C; Conservation management; Aggregate stability; Microbial activity; Crop residue; Soil enzymes

Dry spell analysis and maize yields for two semi-arid locations in east Africa/ Jennie Barron, Johan Rockstrom, Francis Gichuki, Nuhu Hatibu

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Keywords : Dry spell analysis; Rainfall distribution; East Africa; Semi-arid; Maize; Water balance

Development and evaluation of a pelleted feedstuff containing condensed corn steep liquor and raw soybean hulls for dairy cattle diets/ J. M. DeFrain, J. E. Shirley, K. C. Behnke, E. C. Titgemeyer, R. T. Ethington

Animal Feed Science and Technology, Volume 107, Issues 1-4, 30 June 2003, Pages 75-86

Keywords : Soybean hulls; Condensed corn steep liquor; Byproduct

Secondary traits in parental inbreds and hybrids under stress and non-stress environments in tropical maize/ F. J. Betran, D. Beck, M. Banziger, G. O. Edmeades

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Keywords : Secondary traits; Zea mays; General combining ability; Inbreds; Hybrids

Measurement of evapotranspiration of irrigated spring wheat and maize in a semi-arid region of north China/ Yu-Lin Li, Jian-Yuan Cui, Tong-Hui Zhang, Ha-Lin Zhao

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Keywords : Spring wheat; Maize; Crop ET; Crop coefficients; Lysimeter; Reference ET

Deficit irrigation effects on sweet corn (*Zea mays saccharata* Sturt) with drip irrigation system in a semi-arid region: I. Water-yield relationship/ Abdullah Oktem, Mehmet Simsek, A. Gulgun Oktem

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Keywords : Cereals; Nitrogen management; Residue management; DSSAT; Africa

Multi-site, multi-season field tests demonstrate that herbicide seed-coating herbicide-resistance maize controls *Striga* spp. and increases yields in several African countries/ Fred K. Kanampiu, Vernon Kabambe, Cornel Massawe, Lawrence Jasi, Dennis Friesen, Joel K. Ransom, Jonathan Gressel

Crop Protection, Volume 22, Issue 5, June 2003, Pages 697-706

Keywords : Striga; Seed coating; Maize; Imazapyr; Pyriithiobac

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Keywords : Western corn rootworm; Insecticide baits; Invite EC; Carbaryl; Methyl-parathion; Resistance

Modelling corn starch swelling in batch systems: effect of sucrose and hydrocolloids/ Alejandra Kruger, Cristina Ferrero, Noemi E. Zaritzky

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Keywords : Heat transfer; Starch gelatinization; Gums; Microscopy; Rheology

Hormone-mediated nitrogen signaling in plants: implication of participation of abscissic acid in negative regulation of cytokinin-inducible expression of maize response regulator/ Helena Gawronska, Atsushi Deji, Hitoshi Sakakibara, Tatsuo Sugiyama

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Keywords : Abscissic acid; Cytokinin; Nitrogen availability; Response regulator; Xylem sap; Zea mays

The characterization of peroxidases in mitochondria of maize roots/ Vesna Hadzi-Taskovic Sukalovic, Mirjana Vuletic

Plant Science, Volume 164, Issue 6, June 2003, Pages 999-1007

Keywords : Mitochondria; Peroxidase; Root; Zea mays

Remediation of subsoil compaction and compaction effects on corn N availability by deep tillage and application of poultry manure in a sandy-textured soil/ P. P. Motavalli, W. E. Stevens, G. Hartwig

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Keywords : Subsoil compaction; N availability; Poultry manure; Soil water content; Cone penetrometer; Deep tillage

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Keywords : Carbon; Morphology; Photosynthesis; Plant age; Root exudation; Soil compaction

Monitoring water and NO₃-N in irrigated maize fields in the Sorraia Watershed, Portugal/ M. R. Cameira, R. M. Fernando, L. S. Pereira

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Keywords : Water and nitrogen balance; Experimental methods; Nitrate leaching

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Chengli Tong, Charles A. S. Hall, Hongqing Wang
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Pages 523-536

Keywords : Land use change; Rice; Wheat; Maize; Chemical fertilizer

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conventional dairy farms/ R. I. Vazquez, B. R. Stinner, D. A. McCartney
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Pages 559-565

**Keywords : Organic matter; Organic and conventional farms; Mesh
bags; Decomposers; Soil metabolic activity; Ohio**

Availability of corn stover as a sustainable feedstock for bioethanol
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**Keywords : Corn stover; Pulp and paper; Furfural; Strawboard;
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(MDF); Ethanol**

Physicochemical properties of common and waxy corn starches oxidized by
different levels of sodium hypochlorite/ Ya-Jane Wang, Linfeng Wang
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**Keywords : Oxidation; Sodium hypochlorite; Common corn starch;
Waxy corn starch; Crosslinking**

Morphological characterization of the phase behavior of inulin-waxy maize
starch systems in high moisture environments/ J. E. Zimeri, J. L. Kokini
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**Keywords : Inulin; Waxy maize starch; Fluorescence; Polarized light;
Phase diagram**

Structures and rheological properties of corn starch as affected by acid
hydrolysis/ Ya-Jane Wang, Van-Den Truong, Linfeng Wang
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**Keywords : Acid-thinned corn starch; Gel strength; Rheological
properties**

Classification of hyperspectral data by decision trees and artificial neural networks to identify weed stress and nitrogen status of corn/ P. K. Goel, S. O. Prasher, R. M. Patel, J. A. Landry, R. B. Bonnell, A. A. Viau
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Keywords : Remote sensing; Hyperspectral; Classification; Decision tree; Artificial neural networks; Corn; Nitrogen; Weeds

Influence of metalaxyl fungicide seed treatment on severity of rootworm (*Diabrotica* spp.) damage to corn (*Zea mays*) under no-tillage conditions/ Wayne L. Pedersen, James D. Kline, Carl A. Bradley, Daren S. Mueller
Crop Protection, Volume 22, Issue 4, May 2003, Pages 647-652

Keywords : Chlorpyrifos; Corn; Diabrotica; Insecticide; Maize; Metalaxyl; No-till; Pythium; Rootworm; Seed treatment; Zea mays

Using the CERES-Maize model in a semi-arid Mediterranean environment. New modelling of leaf area and water stress functions/ Bechir Ben Nouna, Nader Katerji, Marcello Mastrorilli
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Keywords : Maize; ; Leaf area; Water stress; Pre-dawn leaf water potential; Irrigation regime

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Keywords : CERES-Maize model; Maize; Mediterranean region; Crop simulation; Irrigation

Plant development and leaf area production in contrasting cultivars of maize grown in a cool temperate environment in the field/ C. J. Birch, J. Vos, P. E. L. van der Putten
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Keywords : Leaf appearance; Leaf initiation; Leaf expansion; Maize; Modelling; Phyllochron; Temperature; Thermal time; Zea mays

The application of vegetable, fruit and garden waste (VFG) compost in addition to cattle slurry in a silage maize monoculture: nitrogen availability and use/ Frank Nevens, Dirk Reheul

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Keywords : Silage maize; Dry matter yield; Nitrogen efficiency; Nitrogen uptake; Residual mineral soil N; Compost

Prooxidant activity of lutein and its dimyristate esters in corn triacylglyceride/ Achmad Subagio, Naofumi Morita

Food Chemistry, Volume 81, Issue 1, May 2003, Pages 97-102

Keywords : Carotenoid; Pro-oxidant activity; Lutein; Lutein dimyristate; Corn-triacylglyceride

Effect of corn oil and vitamin E on the oxidative status of adipose tissues and liver in rat/ V. Valls, M. Goicoechea, P. Muniz, G. T. Saez, J. R. Cabo

Food Chemistry, Volume 81, Issue 2, May 2003, Pages 281-286

Keywords : Corn oil; Vitamin E; Glutathione antioxidant systems; Lipid peroxidation

Biodegradability of soluble organic matter in maize-cropped soils/ E. G. Gregorich, M. H. Beare, U. Stoklas, P. St-Georges

Geoderma, Volume 113, Issues 3-4, May 2003, Pages 237-252

Keywords : Biodegradability; Soluble organic matter; Maize-cropped soils

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Keywords : Maize; Irrigation scheduling; Dynamic modelling; Decision rules; Grain yield variability

Partial vacuum storage improves the longevity of primed sh-2 sweet corn seeds/ K. Y. Chiu, C. L. Chen, J. M. Sung

Scientia Horticulturae, Volume 98, Issue 2, 18 April 2003, Pages 99-111

Keywords : Antioxidation; Sweet corn; Emergence; Priming; Partial vacuum storage; Longevity

Productivity in maize based cropping systems under various soil-water-nutrient management strategies in a semi-arid, alfisol environment in East Africa/ J. R. Jensen, R. H. Bernhard, S. Hansen, J. McDonagh, J. P. Moberg, N. E. Nielsen, E. Nordbo

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Keywords : Water harvesting; Tied-ridging; Maize; Semi-arid; Smallholder; Benefit

Crop coefficient and ratio of transpiration to evapotranspiration of winter wheat and maize in a semi-humid region/ Shaozhong Kang, Binjie Gu, Taisheng Du, Jianhua Zhang

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Keywords : Crop coefficient; Evapotranspiration; Transpiration; Leaf area index; Wheat (*Triticum aestivum*); Maize (*Zea Mays*)

Enhancing the ability of CERES-Maize to compute light capture Lizaso J. I., Batchelor W. D., Westgate M. E., Echarte L.

Agricultural Systems, Volume 76, Issue 1, April 2003, Pages 293-311

Keywords : CERES-Maize; IPAR predictions; Solar radiation to PAR conversion; Light extinction coefficient; Leaf area index

Phosphorus availability and maize response to organic and inorganic fertilizer inputs in a short term study in western Kenya/ A. B. Kwabiah, N. C. Stoskopf, C. A. Palm, R. P. Voroney, M. R. Rao, E. Gacheru

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Keywords : Organic materials; Triple superphosphate; Maize yields; Phosphorus availability; Smallholder farming systems

Fourier transform infrared microspectroscopic study of the chemical microstructure of corn and oat flour-based extrudates/ Dirk Rainer Cremer, Gonul Kaletunc

Carbohydrate Polymers, Volume 52, Issue 1, 1 April 2003, Pages 53-65

Keywords : Cereals; Extrusion; Microstructure; FTIR; Microspectroscopy

Rheological properties of inulin-waxy maize starch systems/ J. E. Zimeri, J. L. Kokini

Carbohydrate Polymers, Volume 52, Issue 1, 1 April 2003, Pages 67-85

Keywords : Inulin; Waxy maize starch; Cox-Merz rule; Yield stress; Stress relaxation

On-farm evaluation of improved maize varieties intercropped with some legumes in the control of Striga in the Northern Guinea savanna of Nigeria/ N. C. Kuchinda, I. Kureh, B. D. Tarfa, C. Shinggu, R. Omolehin

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Keywords : Maize varieties; Legume intercrop; Striga control

Two detection methods of genetically modified maize and the state of its import into Japan/ Hideaki Yamaguchi, Kazuo Sasaki, Hironori Umetsu, Hiroshi Kamada

Food Control, Volume 14, Issue 3, April 2003, Pages 201-206

Keywords : Genetically modified organisms; Maize; Recombinant DNA

Application of image analysis to measure screw speed influence on physical properties of corn and wheat extrudates/ Katiba Mezreb, Adeline Goullieux, Robert Ralainirina, Michele Queneudec

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Keywords : Image analysis; Extrusion cooking; Screw speed; Structure; Corn; Wheat

The consequences of wheel-induced soil compaction and subsoiling for silage maize on a sandy loam soil in Belgium/ Frank Nevens, Dirk Reheul

Soil and Tillage Research, Volume 70, Issue 2, April 2003, Pages 175-184

Keywords : Belgium; Nitrogen uptake; Silage maize yield; Soil compaction; Soil mineral nitrogen; Subsoiling

In vitro gas production as a method to compare fermentation characteristics of steam-flaked corn/ E. J. DePeters, G. Getachew, J. G. Fadel, R. A. Zinn, S. J. Taylor, J. W. Pareas, R. G. Hinders, M. S. Aseltine

Animal Feed Science and Technology, Volume 105, Issues 1-4, 31 March 2003, Pages 109-122

Keywords : Gas production; Steam-flaked corn; in vitro; Processing; Mill

Use of triticale alone and in combination with wheat or maize: effects of diet type and enzyme supplementation on hen performance, egg quality, organ weights, intestinal viscosity and digestive system characteristics/ I. Ciftci, E. Yenice, H. Eleroglu

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Keywords : Laying hen; Triticale; Wheat; Enzyme; Viscosity

SEM study of water activity and temperature effects on the initial growth of *Aspergillus ochraceus*, *Alternaria alternata* and *Fusarium verticillioides* on maize grain/M. R. Torres, A. J. Ramos, J. Soler, V. Sanchis, S. Marin

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Keywords : Scanning electron microscopy (SEM); Aspergillus ochraceus; Fusarium verticillioides; Alternaria alternata; Water activity; Maize; Germination; Growth; Ecophysiology

Harvest index stability of Argentinean maize hybrids released between 1965 and 1993/ L. Echarte, F. H. Andrade

Field Crops Research, Volume 82, Issue 1, 20 March 2003, Pages 1-12

Keywords : Maize; Grain yield; Harvest index; Plant density; Kernel number; Kernel weight; Prolificacy

Leaf senescence in maize hybrids: plant population, row spacing and kernel set effects/ L. Borrás, G. A. Maddonni, M. E. Otegui

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Keywords : Leaf senescence; Plant population; Row spacing; Source-sink ratio; Zea mays

Thermal and structural properties of unusual starches from developmental corn lines/ Y. Ji, K. Seetharaman, K. Wong, L. M. Pollak, S. Duvick, J. Jane, P. J. White

Carbohydrate Polymers, Volume 51, Issue 4, 1 March 2003, Pages 439-450

Keywords : Maize starch; Corn starch; Starch structure; Starch function; Starch thermal properties; Starch granules; Starch molecular weight; Starch branch-chain-length

Influence of sucrose on the rheology and granule size of cross-linked waxy maize starch dispersions heated at two temperatures/ V. M. Acquarone, M. A. Rao

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Keywords : Cross-linked waxy maize starch; Sucrose; Rheology; Heating temperature; Viscoelastic behavior

Ability of excised root and stem pieces of maize, cowpea and soybean to cause germination of *Striga hermonthica* seeds/ Alphonse M. Emechebe, M.O.Monday O. Ahonsi

Crop Protection, Volume 22, Issue 2, March 2003, Pages 347-353

Keywords : Striga hermonthica; Germination stimulants; Trap crops; In vitro technique; Suicidal germination

Cytotoxic response of *Aspergillus fumigatus*-produced mycotoxins on growth medium, maize and commercial animal feed substrates/ V. Wenehed, A. Solyakov, I. Thylin, P. Haggblom, A. Forsby

Food and Chemical Toxicology, Volume 41, Issue 3, March 2003, p. 395-403

Keywords : Mycotoxins; Gliotoxin; Aspergillus fumigatus; Animal feed; Cytotoxicity; Neurotoxicity; SH-SY5Y cells

Application of response surface methodology for studying the quality characteristics of cowpea-fortified nixtamalized maize/ Samuel Sefa-Dedeh, Beatrice Cornelius, Esther Sakyi-Dawson, Emmanuel Ohene Afoakwa

Innovative Food Science & Emerging Technologies, Volume 4, Issue 1, March 2003, Pages 109-119

Keywords : Response surface methodology; Nixtamalization; Cowpea fortification; Chemical and functional properties

Quinclorac does not inhibit cellulose (cell wall) biosynthesis in sensitive barnyard grass and maize roots/ Stefan Tresch, Klaus Grossmann

Pesticide Biochemistry and Physiology, Volume 75, Issue 3, March 2003, Pages 73-78

Effect of expander processing on fractional rate of maize and barley starch degradation in the rumen of dairy cows estimated using rumen evacuation and in situ techniques/ R. Tothi, P. Lund, M. R. Weisbjerg, T. Hvelplund
Animal Feed Science and Technology, Volume 104, Issues 1-4, 20 February 2003, Pages 71-94

Keywords : In vivo; Digestibility; Degradability; Heat treatment; Fractional outflow rate; Corn

Effects of phytase on apparent digestibility of organic phosphorus and nutrients in maize-soya bean meal based diets for sows/ S. K. Baidoo, Q. M. Yang, R. D. Walker
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Keywords : Phtytase; Sows; Phosphorus

Stability of spatial variability of wheat and maize biomass in a small field managed under two contrasting tillage systems over 3 years/ J. Yamagishi, T. Nakamoto, W. Richner
Field Crops Research, Volume 81, Issues 2-3, 20 February 2003, p. 95-108

Keywords : Biomass; Maize; Tillage; Precision agriculture; Spatial variability; Wheat

Modelling evapotranspiration of corn (*Zea mays*) under different plant densities/ Jesus M. Gardiol, Leonardo A. Serio, Aida I. Della Maggiora
Journal of Hydrology, Volume 271, Issues 1-4, 10 February 2003, p. 188-196

Keywords : Corn; Evapotranspiration; Leaf area index; Soil water balance

Prey-mediated effects of *Bacillus thuringiensis* spray on the predator *Chrysoperla carnea* in maize/ Anna Dutton, Heiri Klein, Jorg Romeis, Franz Bigler

Biological Control, Volume 26, Issue 2, February 2003, Pages 209-215

Keywords : Bacillus thuringiensis; Dipel; Chrysoperla carnea; Risk assessment; Predator; Transgenic maize; Rhopalosiphum padi; Spodoptera littoralis; Tetranychus urticae

Phase transitions of inulin-waxy maize starch systems in limited moisture environments/ J. E. Zimeri, J. L. Kokini
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Keywords : Inulin; Waxy maize starch; Amylopectin; Glass transition; Phase separation

Potential of airborne hyperspectral remote sensing to detect nitrogen deficiency and weed infestation in corn/ P. K. Goel, S. O. Prasher, J. A. Landry, R. M. Patel, R. B. Bonnell, A. A. Viau, J. R. Miller
Computers and Electronics in Agriculture, Volume 38, Issue 2, February 2003, Pages 99-124

Keywords : Remote sensing; Airborne; Precision agriculture; Nitrogen stress; Weed detection

Effects of maize-legume intercrops on termite damage to maize, activity of predatory ants and maize yields in Uganda/ B. M. Sekamatte, M. Ogenga-Latigo, A. Russell-Smith
Crop Protection, Volume 22, Issue 1, February 2003, Pages 87-93

Keywords : Intercropping; Termites; Lepisiota; Myrmecaria; Maize; Uganda

Larval distribution and survival of second generation European corn borer, *Ostrinia nubilalis* (Hubner) (Lepidoptera: Crambidae) on Event 176 Bt Corn/ Amelia C. Zoerb, Terence Spencer, Richard L. Hellmich, Robert J. Wright, Blair D. Siegfried
Crop Protection, Volume 22, Issue 1, February 2003, Pages 179-184

Keywords : European corn borer; Bt corn; Resistance management

Integration of forage legumes with cereal crops. I. Effects of supplementation with graded levels of lablab hay on voluntary food intake, digestibility, milk yield and milk composition of crossbred cows fed maize-lablab stover or oats-vetch hay ad libitum/ D. R. Mpairwe, E. N. Sabiiti, N. N. Ummuna, A. Tegegne, P. Osuji
Livestock Production Science, Volume 79, Issues 2-3, Feb 2003, p. 193-212

Keywords : Cereals; Forage legumes; Lablab hay; Crossbred cows; Intake; Milk production

Integration of forage legumes with cereal crops: II. Effect of supplementation with lablab hay and incremental levels of wheat bran on voluntary food intake, digestibility, milk yield and milk composition of crossbred cows fed maize-lablab stover or oats-vetch hay ad libitum/ D. R. Mpairwe, E. N. Sabiiti, N. N. Ummuna, A. Tegegne, P. Osuji

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A Decision Support System for smallholder campesino maize-cattle production systems of the Toluca Valley in Central Mexico. Part I-- Integrating biological and socio-economic models into a holistic system/ Octavio A. Castelan-Ortega, Roy H. Fawcett, Carlos Arriaga-Jordan, Mario Herrero

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Keywords : Decision support systems; Biological simulation models; Campesino farmers; Socio-economic simulation models

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Keywords : Model validation; Campesino farmers; Traditional technologies; Cattle feeding systems

Estimating water table contributions to corn and sorghum water use/ A. R. Sepaskhah, A. Kanooni, M. M. Ghasemi

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Keywords : cows. dairy-cows. digestibility. feed-intake. fibre. hybrids. lactation. maize. maize-silage. milk-composition. milk-yield. nutritive-value. silage. starch-digestion. yields

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feed; feed-intake; high-moisture-corn animal-feed, grain-product; lactation-; milk- composition-, dairy-product, yield-; milk-production; pelleted-beet-pulp animal-feed; ruminal-digestion-kinetics

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Keywords : Whole crop maize; Silage; Maturity; Nutritive value; Aerobic stability

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Keywords : Corn; DDGS; Nutrient concentrations; Variation

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Keywords : Carotenoids; Near infrared reflectance spectroscopy; HPLC; Maize; Genotypes

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Sublethal effects of larval treatment with deltamethrin on moth sex pheromone communication system of the Asian corn borer, *Ostrinia furnacalis*/ Hong-yi Wei, Jia-wei Du

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Keywords : **Maize; MADS-box genes; Seed development; Mutator transposable element**

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Keywords : **Yield potential per plant; Optimum plant population; Population-independent hybrids**

Effect of *Yucca schidigera*-based surfactant on ammonia utilization in vitro, and in situ degradability of corn grain/ Alexander N. Hristov, Kami L. Grandeen, Jen K. Ropp, David Greer

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Keywords : **Evapotranspiration; Soil water transport; Irrigation scheduling; Numerical simulation; Seasonal frost areas**

Impact of natural, planted (*Pueraria phaseoloides*, *Leucaena leucocephala*) fallow and landuse intensity on weed seedling emergence pattern and density in cassava intercropped with maize/ Friday Ekeleme, David Chikoye, I. Okezie Akobundu

Agriculture, Ecosystems & Environment, Volume 103, Issue 3, August 2004, Pages 581-593

Keywords : **Shifting cultivation; Planted fallow; Small-scale farming; Seedling emergence; Weed density**

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Keywords : **Pyrolysis; Analysis; Agricultural waste; Corn cob; Utilization**

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Keywords : **Maize; Zea mays L.; Cytoplasmic male sterility; cms; Xenia; Grain yield; Grain nitrogen content**

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Keywords : **Acetylation; Corn starch; Potato starch; Physicochemical; Morphological; Thermal; Syneresis**

Positional distribution of fatty acids in triacylglycerols from subcutaneous adipose tissue of pigs fed diets enriched with conjugated linoleic acid, corn oil, or beef tallow/ D. A. King, J. M. Behrends, B. E. Jenschke, R. D. Rhoades, S. B. Smith

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Keywords : Pigs; Fatty acids; Melting points; Conjugated linoleic acid

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Plant Science, Volume 167, Issue 2, August 2004, Pages 217-223

Keywords : Maize; P deficiency; Organic acids; Acid phosphatase; pH; Root growth

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Keywords : Least limiting water range; Aeration; Cone resistance; Tillage; Trafficking; Corn; Clay loam; CART

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Keywords : *Zea mays* L.; Sulphur; Cadmium; Sulphur metabolism; Nitrogen metabolism

Molecular breakdown of corn starch by thermal and mechanical effects/ R. M. van den Einde, C. Akkermans, A. J. van der Goot, R. M. Boom

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Keywords : Starch; Macromolecular degradation; Heat; Shear; Extrusion

Using near infrared reflectance spectroscopy (NIRS) to predict the biological parameters of maize silage/ D. K. Lovett, E. R. Deaville, F. Mould, D. I. Givens, E. Owen

Animal Feed Science and Technology, Volume 115, Issues 1-2, 1 July 2004, Pages 179-187

Keywords : Near infrared reflectance spectroscopy; Maize silage; Gas production; Digestibility; Degradability

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Keywords : Carbonic acid pretreatment; Liquid hot water pretreatment; Autohydrolysis; Corn stover; Aspen wood;

Scanned and spot measured canopy temperatures of cotton and corn/ D. F. Wanjura, S. J. Maas, J. C. Winslow, D. R. Upchurch

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Keywords : Canopy temperature; Cotton; Corn; Infrared thermocouple; Thermal image

Potential efficacy of spider mite-resistant genes in maize testcrosses/ E. D. Bynum Jr., W. Xu, T. L. Archer

Crop Protection, Volume 23, Issue 7, July 2004, Pages 625-634

Keywords : Spider mites; Resistance; Maize; Testcrosses

Effect of nixtamalization on the chemical and functional properties of maize/ Samuel Sefa-Dedeh, Beatrice Cornelius, Esther Sakyi-Dawson, Emmanuel Ohene Afoakwa

Food Chemistry, Volume 86, Issue 3, July 2004, Pages 317-324

Keywords : Maize; Nixtamalization; Chemical composition; Functional properties

The sesquiterpene hydrocarbons of maize (*Zea mays*) form five groups with distinct developmental and organ-specific distributions/ Tobias G. Kollner, Christiane Schnee, Jonathan Gershenzon, Jorg Degenhardt

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Keywords : *Zea mays* L.; Poaceae; Maize; Sesquiterpenes; Volatiles; Terpene biosynthesis; Terpene synthase; Volatile emission; Herbivore-induced terpene formation

The biochemical reaction of maize (*Zea mays* L.) to salt stress is characterized by a mitigation of symptoms and not by a specific adaptation/
Christian Zorb, Sigrid Schmitt, Angelika Neeb, Sandra Karl, Monica Linder, Sven Schubert

Plant Science, Volume 167, Issue 1, July 2004, Pages 91-100

Keywords : Salt resistance; Proteome; *Zea mays*; MALDI-TOF; 2D gel electrophoresis; NaCl-induced proteins

Response of maize (*Zea mays* L.) nitrate reductase to UV-B radiation/ Silvia Quaggiotti, Anna Rita Trentin, Francesca Dalla Vecchia, Rossella Ghisi

Plant Science, Volume 167, Issue 1, July 2004, Pages 107-116

Keywords : Gene expression; Maize; Nitrate reductase; Photosynthesis; Sugar content; Ultraviolet-B radiation

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Soil and Tillage Research, Volume 78, Issue 1, July 2004, Pages 91-101

Keywords : Corn; Yield; Economic return; Stepwise time response; No tillage; Moldboard plow; Chisel plow; Ridge tillage

Survival of maize (*Zea mays*) pollen exposed in the atmosphere/ Donald E. Aylor

Agricultural and Forest Meteorology, Volume 123, Issues 3-4, 20 June 2004, Pages 125-133

Keywords : Dispersal distance; Dehydration; Germination; Longevity; Pollen viability; Solar irradiance; Vapor pressure deficit; *Zea mays*

Changes in seasonal evapotranspiration, soil water content, and crop coefficients in sugarcane, cassava, and maize fields in Northeast Thailand/
Kota Watanabe, Takashi Yamamoto, Takashi Yamada, Tetsuo Sakuratani, Eiji Nawata, Chairat Noichana, Akadet Sributta, Hirokazu Higuchi

Agricultural Water Management, Volume 67, Issue 2, 15 June 2004, Pages 133-143

Keywords : Bowen ratio energy balance method; Capillary rise; Hargreaves equation; Penman-Monteith equation; Time-domain reflectometry

Evaluation of maize as a refuge for management of resistance to Bt cotton by *Helicoverpa armigera* (Hubner) in the Yellow River cotton-farming region of China/ K. Wu, H. Feng, Y. Guo

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Keywords : *Helicoverpa armigera*; Bt transgenic cotton; Resistance management; Refugia; Maize; China

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Keywords : Soil nitrate content; Nitrogen budget; Nitrogen losses; Surface irrigation; Mediterranean climate

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Keywords : Maize; *Zea mays*; Stalk lodging; Young's modulus

The effects of different accelerating techniques on maize wine maturation/ Audrey Chingzu Chang

Food Chemistry, Volume 86, Issue 1, June 2004, Pages 61-68

Keywords : Accelerating techniques; Maize wine; Maturation

Stability of anthocyanin-based aqueous extracts of Andean purple corn and red-fleshed sweet potato compared to synthetic and natural colorants/ Bolivar A. Cevallos-Casals, Luis Cisneros-Zevallos

Food Chemistry, Volume 86, Issue 1, June 2004, Pages 69-77

Keywords : Color stability; pH; Temperature; Light; Red sweet potato; Purple corn; Purple carrot; Red grape; Red 40

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Food Microbiology, Volume 21, Issue 3, June 2004, Pages 313-318

Keywords : Mycotoxins; Zearalenone; Deoxynivalenol; Fusarium graminearum; Maize; Essential oils

Results of a 13 week safety assurance study with rats fed grain from glyphosate tolerant corn/ B. Hammond, R. Dudek, J. Lemen, M. Nemeth

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Keywords : Corn; Genetically modified; Herbicide tolerant; Roundup herbicide; Rat feeding study

Nutritional suitability of corn pollen for the predator *Coleomegilla maculata* (Coleoptera: Coccinellidae)/ Jonathan G. Lundgren, Robert N. Wiedenmann

Journal of Insect Physiology, Volume 50, Issue 6, June 2004, Pages 567-575

Keywords : Rhopalosiphum spp.; Conversion efficiency; Biomass; Quercetin; Anthesis; Biological control; Facultative phytophagy; Transgenic crops; Zea mays

Effect of extrusion variables on fermented maize-finger millet blend in the production of uji/ Calvin Onyango, Thomas Henle, Anette Ziems, Thea Hofmann, Thomas Bley

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Keywords : Maize; Finger millet; Fermentation; Sugars; Extrusion

Effects of modified corn gluten meal on quality characteristics of a model emulsified meat product/ C. L. Homco-Ryan, K. J. Ryan, S. E. Wicklund, C. L. Nicolalde, S. Lin, F. K. McKeith, M. S. Brewer

Meat Science, Volume 67, Issue 2, June 2004, Pages 335-341

Keywords : Corn gluten meal; Emulsified meat product; Quality; Sensory; Color; Texture

A two-dimensional proteome map of maize endosperm/ Valerie Mechin, Thierry Balliau, Sophie Chateau-Joubert, Marlene Davanture, Olivier

Langella, Luc Negroni, Jean-Louis Prioul, Claudine Thevenot, Michel Zivy, Catherine Damerval

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Keywords : **Zea mays L.; Poaceae; Maize; 2D PAGE; LC-MS/MS; Endosperm proteins; 2D map**

Cytoplasmic calcium in silk trichomes after pollen grain reception and post-pollination changes of the electric potential in pistil tissues of maize/ R. Mol, M. Filek, C. Dumas, E. Matthys-Rochon

Plant Science, Volume 166, Issue 6, June 2004, Pages 1461-1469

Keywords : **Cytoplasmic Ca²⁺; Electric potential; Pollen hydration and germination; Stigma-to-ovule signalling; Zea mays L.**

Effect of a slow-intake urea supplementation on growing kids fed corn stubble or alfalfa with a balanced concentrate/ M. A. Galina, M. Guerrero, C. Puga, G. F. W. Haenlein

Small Ruminant Research, Volume 53, Issues 1-2, June 2004, Pages 29-38

Keywords : **Goat kids; Growth; Non-protein N supplementation; Rumen fermentation; Corn stubble**

Field pea (*Pisum sativum*) inclusion in corn-based lamb finishing diets/ E. R. Loe, M. L. Bauer, G. P. Lardy, J. S. Caton, P. T. Berg

Small Ruminant Research, Volume 53, Issues 1-2, June 2004, Pages 39-45

Keywords : **Field pea; Lamb; Finishing; Energy; Protein**

Fattening Rambouillet lambs with corn stubble or alfalfa, slow intake urea supplementation or balanced concentrate/ M. A. Galina, J. D. Hummel, M. Sanchez, G. F. W. Haenlein

Small Ruminant Research, Volume 53, Issues 1-2, June 2004, Pages 89-98

Keywords : **Lambs; Growth; Non-protein N supplementation; Rumen fermentation; Corn stubble**

PCR-restriction fragment length analysis of aflR gene for differentiation and detection of *Aspergillus flavus* and *Aspergillus parasiticus* in maize/ D. Somashekar, E. R. Rati, A. Chandrashekar

International Journal of Food Microbiology, Volume 93, Issue 1, 15 May 2004, Pages 101-107

Keywords : **Aspergillus flavus; Aspergillus parasiticus; Maize; PCR; RFLP; afIR**

Hybrid-maize--a maize simulation model that combines two crop modeling approaches/ H. S. Yang, A. Dobermann, J. L. Lindquist, D. T. Walters, T. J. Arkebauer, K. G. Cassman

Field Crops Research, Volume 87, Issues 2-3, 10 May 2004, Pages 131-154

Keywords : **Crop models; Crop simulation; Yield potential; Zea mays**

Effective management of irrigation water for maize under stressed conditions/ R. K. Panda, S. K. Behera, P. S. Kashyap

Agricultural Water Management, Volume 66, Issue 3, 1 May 2004, Pages 181-203

Keywords : **Irrigation; CERES-Maize Model; Validation; Water balance; Depletion level; Water use efficiency**

Comparing Penman-Monteith and Priestley-Taylor approaches as reference-evapotranspiration inputs for modeling maize water-use under Mediterranean conditions/ Angel Utset, Imma Farre, Antonio Martinez-Cob, Jose Cavero

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Keywords : **Crop water-use modeling; Reference-evapotranspiration calculation; Mediterranean conditions; Maize irrigation**

GPFARM modeling of corn yield and residual soil nitrate-N/ M. J. Shaffer, P. N. S. Bartling, G. S. McMaster

Computers and Electronics in Agriculture, Volume 43, Issue 2, May 2004, Pages 87-107

Keywords : **Whole-farm management; Soil-crop models; Environmental quality; Decision support systems; Model validation**

Heat stability and flow behaviour of buffalo milk added with corn starch/ S. K. Nayak, A. Makrariya, R. R. B. Singh, A. A. Patel, J. S. Sindhu, G. R. Patil, Priyanka Tomar

Food Hydrocolloids, Volume 18, Issue 3, May 2004, Pages 379-386

Keywords : Buffalo milk; Corn starch; Gelatinization; Heat stability; Viscosity; Shear thinning

The ESR spectroscopic features and kinetics of the radiation-induced free radicals in maize (*Zea mays* L.)/ M. Polat, M. Korkmaz
Food Research International, Volume 37, Issue 4, May 2004, Pages 293-300

Keywords : ESR; Maize; Irradiation; Kinetics

Functional properties of extruded foam composites of starch acetate and corn cob fiber/ Junjie Guan, Milford A. Hanna,
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Keywords : Starch acetate; Extrusion; Cellulosic fiber; Foam

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Keywords : Accelerated aging; Storage; Corn; Sorghum; Starch and protein changes; Case hardening

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Physiological and Molecular Plant Pathology, Volume 64, Issue 5, May-May 2004, Pages 273-279

Keywords : *Helminthosporium carbonum*; HC-toxin; PDMS; Plasma desorption mass spectrometry

Larvicidal Cry proteins from *Bacillus thuringiensis* are released in root exudates of transgenic *B. thuringiensis* corn, potato, and rice but not of *B. thuringiensis* canola, cotton, and tobacco/ Deepak Saxena, C. Neal Stewart, Illimar Altosaar, Qingyao Shu, G. Stotzky

Plant Physiology and Biochemistry, Volume 42, Issue 5, May 2004, Pages 383-387

Keywords : *Bacillus thuringiensis*; Hydroponics; Insecticidal proteins; Root exudates; Soil; Surface-active particles (e.g. clay minerals, humic substances); Transgenic Bt plants

Cloning of potato SBgLR gene and its intron splicing in transgenic maize/
Zhihong Lang, Qian Zhao, Jingjuan Yu, Dengyun Zhu, Guangming Ao
Plant Science, Volume 166, Issue 5, May 2004, Pages 1227-1233

Keywords : Potato (*Solanum tuberosum* L.); SBgLR gene; Intron; Splicing

Evaluation of in vitro methods to define the role of the cob and pedicel-placento-chalazal tissues in the amino acid supply to the developing maize endosperm/ Carlotta Balconi, Andrea Cavallini, Lucia Natali, Mario Motto
Plant Science, Volume 166, Issue 5, May 2004, Pages 1313-1320

Keywords : Endosperm development; Chromosome endoreduplication; In vitro culture; Pedicel-placento-chalazal (PPCh) region; Glutamine; *Zea mays* L.

Characterization of a dicarboxylate exchange system able to exchange pyrophosphate for -malate in non-photosynthetic plastids from developing maize embryos/ Aurora Lara-Nunez, Rogelio Rodriguez-Sotres
Plant Science, Volume 166, Issue 5, May 2004, Pages 1335-1343

Keywords : Plastid; Dicarboxylate translocator; Pyrophosphate; *Zea mays*

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Keywords : Legumes; Sandy soils; Soil fertility technologies; Root length density; Mineral N; Arenosol; Zimbabwe

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Agriculture, Ecosystems & Environment, Volume 102, Issue 2, April 2004, Pages 133-153

Keywords : Drought disaster; Risk assessment; Crop yield-climate analysis; Fuzzy cluster analysis; Maize; Songliao Plain

The impacts of ditch cuttings on weed pressure and crop yield in maize/
Marcel P. Huijser, Bastiaan G. Meerburg, Gertjan Holshof
Agriculture, Ecosystems & Environment, Volume 102, Issue 2, April 2004,
Pages 197-203

Keywords : Green compost; Multifunctional landscapes; Organic farming; *Phragmites australis*; Weeds; *Zea mays*

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Keywords : Corn stover; Residue; Field drying; Stover:grain ratio; Residue multipliers

An automated approach to mapping corn from Landsat imagery/ S. K. Maxwell, J. R. Nuckols, M. H. Ward, R. M. Hoffer
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Pages 43-54

Keywords : Satellite remote sensing; Geospatial technology; Crop mapping; Corn

Characterisation of cysteine proteinases responsible for digestive proteolysis in guts of larval western corn rootworm (*Diabrotica virgifera*) by expression in the yeast *Pichia pastoris*/ David P. Bown, Hillary S. Wilkinson, Maarten A. Jongsma, John A. Gatehouse
Insect Biochemistry and Molecular Biology, Volume 34, Issue 4, April 2004,
Pages 305-320

Keywords : Cathepsin L; Cathepsin B; Yeast expression system; Insect proteases; Protease inhibitors (PI); *Diabrotica virgifera virgifera* LeConte

Effect of replacing maize grain with de-oiled rice bran on intake and utilisation of nutrients in adult ewes/ A. K. Garg, P. Singh, R. Malik, D. K. Agrawal
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Keywords : Ewes; De-oiled rice bran; Nutrient utilisation; Maize grain; Sheep

Effect of nixtamalization on the modification of the crystalline structure of maize starch/ M. Mondragon, L. A. Bello-Perez, E. Agama, A. Melo, D. Betancur-Ancona, J. L. Pena,

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Keywords : Probiotic bacteria; Maize; Metabolism; Fermentation

Seed dry weight response to source-sink manipulations in wheat, maize and soybean: a quantitative reappraisal/ Lucas Borrás, Gustavo A. Slafer, Maria E. Otegui,

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Keywords : Triticum aestivum; Wheat; Zea mays L.; Maize; Glycine max L.; Soybean; Source-sink; Seed filling; Seed weight

Do pigeon pea and sesbania supply groundwater to intercropped maize through hydraulic lift?--Hydrogen stable isotope investigation of xylem waters/ Nobuhito Sekiya, Katsuya Yano

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Keywords : Agroforestry; Below-ground interaction; Drought avoidance; Irrigation; Sustainable agriculture; Water relations

Effect of supplementation of maize stover with foliage of various tropical multipurpose trees and Lablab purpureus on intake, rumen fermentation, digesta kinetics and microbial protein supply of sheep/ I. K. Hindrichsen, P. O. Osuji, A. A. Odenyo, J. Madsen, T. Hvelplund

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Keywords : Multipurpose trees; Maize stover; Intake; Digestibility; Microbial nitrogen supply; Ruminant

Amino acid digestibility and nitrogen utilization of high oil, high lysine, and waxy maize fed to growing pigs/ J. L. Snow, H. H. Stein, P. K. Ku, N. L. Trottier

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Keywords : Pigs; Amino acids; Digestibility; Nitrogen utilization; High oil maize; High lysine maize; Waxy maize

Comparison of corn yield response to plant water stress caused by salinity and by drought/ N. Katerji, J. W. van Hoorn, A. Hamdy, M. Mastrorilli

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Keywords : Corn; Salinity; Drought

Ethanol recovery from corn fiber hydrolysate fermentations by pervaporation/ Dennis J. O'Brien, Gerard E. Senske, Michael J. Kurantz, James C. Craig Jr.

Bioresource Technology, Volume 92, Issue 1, March 2004, Pages 15-19

Keywords : Ethanol; Corn fiber; Hemicellulose; Ion exchange; Inhibitors fermentation; Pervaporation; Xylose; Escherichia coli; Biofuel

Effect of genotype, malt pretreatment and cooking on in vitro protein digestibility and protein fractions of corn/ Aisha S. M. Fageer, A. H. El Tinay

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Keywords : Corn; Cooking; In vitro protein digestibility; Protein fractions

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Food Research International, Volume 37, Issue 2, March 2004, p. 175-180

Keywords : Phytosterol ester; MCFAs; CLA; Esterification; Lipase; Crystallization

Fumonisin contamination of a corn sample associated with the induction of hepatocarcinogenesis in rats--role of dietary deficiencies/ W.C.A.

Gelderblom, J.P. Rheeder, N. Leggott, S. Stockenstrom, J. Humphreys, G.S. Shephard, W.F.O. Marasas,

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Keywords : Fumonisin; Carcinogenesis; Nutrition deficiencies

Study of high amylose corn starch as food grade enteric coating in a microcapsule model system/ Anna Dimantov, Menahem Greenberg, Ellina Kesselman, Eyal Shimoni

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Keywords : High amylose corn starch; Resistant starch; Encapsulation; Colonic delivery; Enteric coating

Effects of endosperm hardness and extrusion temperature on properties of products obtained with grits from two commercial maize cultivars/ Rolando J. Gonzalez, Dardo M. De Greef, Roberto L. Torres, Francisco S. Borrás, Jose Robutti

Lebensmittel-Wissenschaft und-Technologie, Volume 37, Issue 2, March 2004, Pages 193-198

Keywords : Maize; Extrusion; Hardness; Texture; Moisture; Properties

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Macronutrient deficiencies and differential antioxidant responses--influence on the activity and expression of superoxide dismutase in maize/ Rajesh Kumar Tewari, Praveen Kumar, Neeraj Tewari, Sugandha Srivastava, Parmanand Sharma

Plant Science, Volume 166, Issue 3, March 2004, Pages 687-694

Keywords : Lipid peroxidation; Macronutrients deficiency stress; ROS; SOD; Zea mays

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Small Ruminant Research, Volume 51, Issue 3, March 2004, Pages 229-233

Keywords : Goat; Feeding and nutrition; Barley; Corn

T. A. Spedding, C. Hamel, G. R. Mehuys, C. A. Madramootoo, Soil microbial dynamics in maize-growing soil under different tillage and residue management systems,

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Keywords : Microbial community composition; Microbial biomass; Phospholipid fatty acids; Tillage; Residue management

High-yield cellulase production by *Trichoderma reesei* ZU-02 on corn cob residue/ Xia Liming, Shen Xueliang

Bioresource Technology, Volume 91, Issue 3, February 2004, Pages 259-262

Keywords : Cellulase; Cellobiase; Submerged fermentation; Corn cob residue; Hydrolysis

Structural changes of corn starches by heating and stirring in DMSO measured by SEC-MALLS-RI system/ Jung-Ah Han, Seung-Taik Lim

Carbohydrate Polymers, Volume 55, Issue 3, February 2004, Pages 265-272

Keywords : Starch; Dimethyl sulfoxide; Boiling; Stirring; Degradation

Response of maize varieties to *Striga* infestation/ A. Oswald, J. K. Ransom

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Keywords : *Striga hermonthica*; Maize varieties; *Striga* tolerance; *Striga* resistance

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Keywords : Quality protein maize; Solid state fermentation; Tempeh flour

Fusaproliferin, beauvericin and fumonisin production by different mating populations among the *Gibberella fujikuroi* complex isolated from maize/ Maria M. Reynoso, Adriana M. Torres, Sofia N. Chulze, *Mycological Research, Volume 108, Issue 2, February 2004, Pages 154-160*

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Keywords : Carbohydrate; *Incw2*; *Ivr2* gene; Seed abortion; *Zea mays*

Influence of bacterial-feeding nematodes (Cephalobidae) on soil microbial communities during maize growth/ D. Djigal, A. Brauman, T. A. Diop, J. L. Chotte, C. Villenave

Soil Biology and Biochemistry, Volume 36, Issue 2, Feb. 2004, p. 323-331

Keywords : DNA fingerprinting; Denaturing gradient gel electrophoresis; Bacterial-feeding nematodes; Inorganic N; Phosphatase activity

Residual effects of potassium placement for conservation-till corn on subsequent no-till soybean/ Xinhua Yin, Tony J. Vyn

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Keywords : Potassium; Soybean; Glycine max (L.) Merr.; No-till; Zone-till; Mulch-till; Residual fertility

Structural changes in corn starches during alkaline dissolution by vortexing/ Jung-Ah Han, Seung-Taik Lim

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Keywords : Corn starch; Alkali; Degradation; Molecular weight

Dynamics of insect resistance in Bt-corn/ Nicholas A. Linacre, Colin J. Thompson

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Keywords : Insect resistance; European Corn Borer; Bt-corn; Logistic growth

In vitro evaluation of fibrolytic enzymes as additives for maize (*Zea mays* L.) silage: I. Effects of ensiling temperature, enzyme source and addition level/ Dario Colombatto, Fergus L. Mould, Mahalingeshwara K. Bhat, Richard H. Phipps, Emyr Owen

Animal Feed Science and Technology, Volume 111, Issues 1-4, 12 January 2004, Pages 111-128

Keywords : Enzymes; Maize silage; Temperature; Gas production; Degradability

In vitro evaluation of fibrolytic enzymes as additives for maize (*Zea mays* L.) silage: II. Effects on rate of acidification, fibre degradation during ensiling and rumen fermentation/ Dario Colombatto, Fergus L. Mould, Mahalingeshwara K. Bhat, Richard H. Phipps, Emyr Owen,

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Keywords : Enzymes; Fermentation; Gas production; Maize silage; Mesophile; Thermophile

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Keywords : Digestion; Enzyme additives; Maize silage; Mesophile; Psychrophile; Thermophile

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Keywords : Goats; Agricultural residue; Legume trees; Intake; Digestibility

Intra-specific competition in maize: early establishment of hierarchies among plants affects final kernel set/ G. A. Maddonni, M. E. Otegui
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Keywords : **Intra-specific competition; Plant hierarchies; Kernel number; Maize**

Growing season carbon dioxide exchange in irrigated and rainfed maize/ A. E. Suyker, S. B. Verma, G. G. Burba, T. J. Arkebauer, D. T. Walters, K. G. Hubbard

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Keywords : **Net ecosystem CO₂ exchange; Maize; Irrigated; Rainfed; Biomass accumulation**

A bioethanol process development unit: initial operating experiences and results with a corn fiber feedstock/ Daniel J. Schell, Cynthia J. Riley, Nancy Dowe, Jody Farmer, Kelly N. Ibsen, Mark F. Ruth, Susan T. Toon, Robert E. Lumpkin

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Keywords : **Corn fiber; Cellulose; Pilot plant; Pretreatment; Fermentation; Dilute-acid hydrolysis; Cellulase; Ethanol; Contamination**

Glass transition and enthalpy relaxation of cross-linked corn starches/ Hyun-Jung Chung, Kyung-Soo Woo, Seung-Taik Lim

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Keywords : **Cross-linked starch; Glass transition; Enthalpy relaxation**

Effect of sugars and sugar alcohols on freezing behavior of corn starch gel as monitored by time domain 1H NMR spectroscopy/ Y. -R. Kim, B. -S. Yoo, P. Cornillon, S. -T. Lim

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Keywords : **Starch gels; Ice melting temperature; NMR spectroscopy; Sugars; Glass transition**

Surface characterization and dissolution properties of high amylose corn starch-pectin coatings/ Anna Dimantov, Ellina Kesselman, Eyal Shimoni
Food Hydrocolloids, Volume 18, Issue 1, January 2004, Pages 29-37

Keywords : High amylose corn starch; Pectin; Colonic delivery; In-vitro dissolution; Atomic force microscopy

Effects of sugars and sugar alcohols on thermal transition and cold stability of corn starch gel/ M. H. Baek, B. Yoo, S. -T. Lim

Food Hydrocolloids, Volume 18, Issue 1, January 2004, Pages 133-142

Keywords : Corn starch; Sugar; Sugar alcohol; Glass transition; Cold stability; Starch recrystallization

Stability and rheology of corn oil-in-water emulsions containing maltodextrin/

Utai Klinkesorn, Pairat Sophanodora, Pavinee Chinachoti, D. J. McClements

Food Research International, Volume 37, Issue 9, 2004, Pages 851-859

Keywords : Maltodextrin; Nonionic surfactant; Oil-in-water emulsion; Critical flocculation concentration; Rheology

Development of real-time PCR systems based on SYBR(R) Green I, Amplifluor(TM) and TaqMan(R) technologies for specific quantitative detection of the transgenic maize event GA21/ Marta Hernandez, Teresa Esteve, Salome Prat, Maria Pla

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Keywords : Transgenic maize; GA21; Real-time PCR; Genetically modified organisms quantification

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Keywords : Corn tortillas; Glycerol; High pressure; Water properties

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Keywords: Common sunflower; Directed dispersal; Seed; Soil heterogeneity; Soil variability; Weed distribution

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Keywords: Dried masa; Nixtamalisation; Carboxymethylcellulose; Xanthan gum; Thermal analysis; Rheology; Zea mays

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Keywords: Carbon input; Corn; Soil organic carbon; Soil organic nitrogen; Soybean; Tillage; Yield

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Keywords: Bulk density; Grain yield; Tillage; Residue; Maize; No-till; Corn; Conservation tillage

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Keywords: Acclimation; Antioxidative enzymes; Hydrogen peroxide; Lipid peroxidation; Maize; Oxidative stress; Salt stress; Zea mays

Sugar-cellulose composites VII. A comparative assessment of corn syrup as a fiber substitute in paper/ G. Graham Allan, Porraanee Rattanaviwatpong, Eric B. Guyette, Tracy C.S. Ho, Jason C. Mallari, Anne Pfeif

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Keywords: Cell wall; Cellulose; Corn syrup; Glucose; Lactose; Maltose; Micropores; Paper properties; Surface strength; Refining

Qualitative and quantitative detection of genetically modified maize and soy in processed foods sold commercially in Brazil by PCR-based methods/ Ralf Greiner, Ursula Konietzny, Anna L.C.H. Villavicencio

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Keywords: Detection method; gm maize; gm soy; Polymerase-chain-reaction; Transgenic food

Targeting agricultural research to benefit poor farmers: Relating poverty mapping to maize environments in Mexico/ Mauricio R. Bellon, David Hodson, David Bergvinson, David Beck, Eduardo Martinez-Romero, Yinha Montoya

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Keywords: Poverty mapping; Maize mega-environments; Targeting crop breeding; Biophysical data; Rural poor; Mexico

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Keywords: Maize silage; Gas production technique; Rumen degradability

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Keywords: Grass silage; Maize silage; Digestibility estimation; Cross-validation

Effect of mimosa tannin and pectin on microbial protein synthesis and gas production during in vitro fermentation of ¹⁵N-labelled maize shoots/ M.H.L. Bento, H.P.S. Makkar, T. Acamovic

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Keywords: Microbial protein synthesis; Mimosa tannin; Pectin; PEG; In vitro gas production; Maize shoots

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Keywords: Thermoplastic starch; Plasma polymerisation; Atomic force microscopy; Water sensitivity

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Field Crops Research, Volume 93, Issues 2-3, 14 September 2005, p. 132-141

Keywords: Abscisic acid; N-fertiliser recovery; Root-to-shoot signalling; Water-use efficiency; Zea mays

Development, yield, grain moisture and nitrogen uptake of Bt corn hybrids and their conventional near-isolines/ B.L. Ma, K.D. Subedi

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Keywords: Corn or maize; Grain yield; Nitrogen response; Bt hybrids; Transgenic isolines; Agronomic benefit

Aluminium-induced callose formation in root apices: inheritance and selection trait for adaptation of tropical maize to acid soils/ Dejene Eticha, Charles The, Claude Welcker, Luis Narro, Angelika Sta[ss], Walter J. Horst

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Keywords: Aluminium toxicity; Callose; Diallel cross; General combining ability (GCA); Maize (Zea mays L.); Soil acidity

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Keywords: Aflatoxin; Ammoniation; Chicken; Feed; Liver damage; Toxicity; Production

A dose-response trial with ziram-treated maize and free-ranging European badgers *Meles meles*/ Sandra E. Baker, Stephen A. Ellwood, Richard W. Watkins, David W. Macdonald

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Identifiersacid detergent fibre. Hyphomycetes. neutral detergent fibre

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septic-tank-effluent. sewage-sludge. silt-loam-soils. soil-types

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