



III International Symposium on Tomato Diseases

July 25-30, 2010, Ischia (NA) (Italy)



THIRD INTERNATIONAL SYMPOSIUM ON TOMATO DISEASES

Hotel Continental Terme, 25 – 30 July, 2010

Ischia, Naples – Italy

SYMPOSIUM PROGRAM

July, Sunday 25th, 2010

17.00-20.00 Registration

20.30 Welcome cocktail

July, Monday 26th, 2010

08.30-9.30 Poster set-up

09.30-11.00 Opening Ceremonies

Plenary lecture: COMPARATIVE GENOMICS OF XANTHOMONADS INFECTING TOMATO. Neha Potnis¹, Ksenia Krasileva², Adam Phillippy⁵, Gerald V. Minsavage¹, Boris Vinatzer³, David J Norman⁴, Steven L. Salzberg⁵, Brian J. Staskawicz² and Jeffrey B. Jones¹. ¹Department of Plant Pathology, University of Florida, Gainesville, FL 32611, U.S.A.; ²Department of Plant and Microbial Biology, University of California, Berkeley, Berkeley, California 94720-3102, U.S.A.; ³Department of Plant Pathology, Physiology, and Weed Sciences, Virginia Tech, Blacksburg, VA 24601, U.S.A.; ⁴Mid-Florida Research and Education Center, University of Florida, Apopka, FL 32703-8504, U.S.A.; ⁵Center for Bioinformatics and Computational Biology, University of Maryland, College Park, Maryland, U.S.A.

11.00-11.30 Coffee Break

11.30-12.30: SESSION "TOMATO INDUSTRY"

Chair: Dr. Marco Serafini (France)

Dr. Maurizio De Santis (Italy)

11.30-11.45 **NATIONAL SYSTEM OF SURVEILLANCE PHYTOPATHOLOGY AND QUALITY OF PROCESSING TOMATOES.** M. Desantis¹, R. Griffo² and F. Rispoli². ¹Ministero delle Politiche Agricole Alimentari e Forestali ²Servizio fitosanitario Regione Campania

11.45-12.00 **THE TOMATO INDUSTRY IN THE WORLD.** M. Serafini, WPTC (World Processing Tomato Council) 37 lot "Les Valerianes" 84700 Sourgues - France

12.15-12.30 **THE TOMATO INDUSTRY: THE EVOLUTION OF CHAIN IN ITALY.** A. Pancrazio, President ANICAV (Associazione Nazionale Industriali Conserve Alimentari Vegetali) Centro Direzionale Viale della Costituzione - Isola F/3 80143 NAPOLI - Italy

12.30-12.45 **TOTAL QUALITY MANAGEMENT AND CURRENT EVOLUTION OF THE ITALIAN TOMATO PROCESSING INDUSTRY.** L. Sandei, L. Palmieri, P. Risi and F. De Sio. SSICA – Stazione Sperimentale per l'industria delle Conserve Alimentari, Viale F. Tanara 31/a 43100 Parma - Italy

12.45-13.45 Lunch

13.45-14.30 Poster viewing

14.30-18.00: SESSION "TOMATO DISEASES CAUSED BY FUNGI"

Chair: Dr M. Babadoost (USA)

Dr A. Infantino A. (Italy)

- 14.30-15.00 **Invited Lecture: MAJOR FUNGAL DISEASES OF TOMATOES IN THE UNITED STATES AND THEIR MANAGEMENT".** *M. Babadoost*. Department of Crop Sciences, University of Illinois, Urbana, IL 61801, USA.
- 15.00-15.15 **STUDY OF GENETIC STRUCTURE OF ITALIAN POPULATIONS OF PYRENOCHAETA LYCOPERSICI BY AFLP ANALYSIS.** *N. Pucci, M. Ferrante, A. Infantino*. CRA-PAV, Centro di Ricerca per la Patologia Vegetale, Via C.G. Bertero 22, 00156 Roma, Italy.
- 15.15-15.30 **GENOTYPIC DIVERSITY OF *PHYTOPHTHORA INFESTANS* RECOVERED FROM TOMATO IN FLORIDA.** *R. Donahoo¹, S. Zhang², D. Cooke³, and P. Roberts¹*. ¹University of Florida IFAS-SWFREC, 2685 SR 29 N, Immokalee, FL 34142. ²University of Florida IFAS-TREC, 18905 S.W. 280 Street, Homestead, FL 33031. ³SCRI, Invergowrie, Dundee, DD2 5DA, Scotland, United Kingdom.
- 15.30-15.45 **INVESTIGATION ON RACES AND GENETIC DIVERSITY IN POPULATION OF *FUSARIUM OXYSPORUM* F.SP. *LYCOPERSICI* FROM TOMATO IN KHORASAN PROVINCE USING DIFFERENTIAL HOSTS AND RAPD MOLECULAR MARKER.** *N. Heidarzadeh, M. Falahati Rastegar and B. Jafarpour*. Department of Plant Pathology – Faculty of Agriculture Ferdowsi - University Mashhad - Iran
- 15.45-16.00 **INOCULUM SOURCES AND PRESERVATION IN SOILS OF *PHYTOPHTHORA PARASITICA* FROM TOMATO "CHERRY" IN CONTINENTAL CROP AREAS IN SOUTHEAST SPAIN.** *M. De Cara¹, D. Palmero², M. Pérez-Vargas¹, M. Santos-Hernández¹, J. Gómez-Vázquez³ and J.C.Tello-Marquina¹*. ¹Departamento Producción Vegetal. Universidad de Almería, Ctra. Sacramento s/n. 04120 Almería (Spain). ²Escuela Universitaria de Ingeniería Técnica Agrícola, Ciudad Universitaria s/n. 28040 Madrid (Spain). ³Instituto de Investigación y Formación Agraria y Pesquera, Camino San Nicolás s/n, La Mojonera (Spain).

16.00-16.30 Coffee break

Chair: Dr. Saygili H. (Turchia)

E. Lahoz E. (Italy)

- 16.30-17.00 **Invited Lecture: POLYAMINE SPERMIDINE IS AN UPSTREAM REGULATOR OF ETHYLENE-REGULATED PATHOGENESIS OF BOTRYTIS CINEREA IN TOMATO.** *S. Nambeesan¹, S. Abu Qamar², A.K. Mattoo³, T. Mengiste² and A. K. Handa¹*. ¹Department of Horticulture and Landscape Architecture, Center for Plant Environmental Stress Physiology, Purdue University, West Lafayette, IN 47907, USA. ²Department of Botany and Plant Pathology, Purdue University, 915 West State Street, West Lafayette, IN 47907, USA. ³Sustainable Agricultural Systems Laboratory, United States Department of Agriculture, Agricultural Research Service, The Henry A. Wallace Beltsville Agricultural Research Center, Building 001, Beltsville, MD 20705, USA.
- 17.00-17.15 **FRUIT ANTHRACNOSE OF TOMATO IN BULGARIA.** *Z. Stoyanova¹, R. Rodeva¹ and N. Petrov²*. ¹Institute of Genetics, Bulgarian Academy of Sciences, 1113 Sofia, Bulgaria, ²Plant Protection Institute, National Service for Plant Protection, 2230 Kostinbrod, Bulgaria.
- 17.15-17.30 **DISTRIBUTION OF TOMATO LEAF MOULD (*Passalora fulva* (Cooke) U. Braun & Crous, syn. *Cladosporium fulvum*) IN CROATIA.** *A. Novak, K. Vesna T. and Masten Milek*. Croatian Centre for Agriculture, Food and Rural Affairs, Institute for Plant Protection, Svetošimunska 25, 10040 Zagreb, Croatia.
- 17.30-17.45 **PATHOGENECITY OF *FUSARIUM OXYSPORUM* F.SP. *LYCOPERSICI* ON COMMON TOMATO CULTIVARS IN LIBYA.** *S. S. El-Ammari¹ and S. A. M. Safar²*. ¹Botany Dept. Science Faculty-Garyounis University-Benghazi-Libya. ²Faculty of Science, University of Misurata – Libya.

17.45-18.00 **CLASSIFICATION AND GENETIC DIVERSITY OF *RHIZOCTONIA SOLANI* POPULATIONS CAUSING TOMATO DAMPING-OFF IN IRAN** P. Taheri and S. Tarighi. Department of Crop Protection, Faculty of Agriculture, Ferdowsi University of Mashhad, P.O. Box 91775-1163, Mashhad, Iran.

July, Tuesday 27th, 2010

08.30-10.00: SESSION "TOMATO DISEASES CAUSED BY BACTERIA"

Chair: Shtienberg D. (Israel)

M. A. AL- Saleh. (Saudi Arabia)

8.30-9.00 **Invited Lecture: SECONDARY SPREAD OF *CLAVIBACTER MICHIGANENSIS* SUBSP. *MICHIGANENSIS*, THE CAUSAL AGENT OF BACTERIAL CANKER OF TOMATOES, IN TIME AND SPACE.** D. Shtienberg¹, M. Bornstein^{*1}, G. Shaharabani¹, R. Shulhani¹, Y. Rekah² and S. Manulis¹. ¹ Department of Plant Pathology and Weed Research, ARO, the Volcani Center, PO Box 6 Bet Dagan 50250 Israel. ² Department of Phytopathology and Microbiology, Faculty of Agriculture, Rehovot, Israel.

9.00-9.15 **SCREENING TOMATO VARIETIES FOR HIGH B-CAROTENE AND BACTERIAL WILT RESISTANCE.** C. Sangrit,¹ S. Techawongstien,² P. Thummabenjapone and H. Bolkan⁴. ^{1 2} ³Department of Plant Science and Agricultural Resources Faculty of Agriculture Khon Kaen University, 40002 Thailand. ⁴Campbell Research and Development, 2806 Country road 104 Davis, CA 95616 USA.

9.15-9.30 **A DRAMATIC SHIFT IN TOMATO RACE IN FLORIDA SINCE 1991.** R.E. Stall¹, G. V. Minsavage¹, A. Obradovic² and J. B. Jones¹. ¹University of Florida, Plant Pathology Department, Gainesville, FL USA. ²Department of Phytomedicine, Faculty of Agriculture, University of Belgrade, 11080 Belgrade-Zemun, Serbia.

9.30-9.45 **CONTROL OF BACTERIAL WILT DISEASE OF TOMATO: A REVIEW OF RESEARCH EFFORTS IN NIGERIA.** O. S. Adebayo. National Horticultural Research Institute P.M.B. 5432, Idi-ishin, Ibadan, Nigeria.

9.45-10.00 **OCCURRENCE OF TOMATO BACTERIAL SPOT IN SAUDI ARABIA, AND EFFECT OF SALICYLIC ACID TREATMENTS ON DISEASE INCIDENCE.** Y. E. Ibrahim^{*} and M. A. AL- Saleh. Plant Protection Department, College of Food and Agriculture Sciences, King Saud University, Saudi Arabia, PO. Box 2460, Riyadh 11451.

10.00-10.15 **TOMATO BACTERIAL WILT (*R. SOLANACEARUM*) STUDIES IN SRI LANKA.** K. D. Bandula Kelaniyangoda. Faculty of Agriculture and plantation management, department of Horticulture and landscape Gardening, Wayamba University of Sri Lanka, Makandura , Gonawila (NWP), Sri Lanka.

10.15-10.30 Coffee break

10.30-13.00: SESSION "TOMATO DISEASES CAUSED BY NEMATODES"

Chair: S. Molinari (Italy)

S. Haroon (Egitto)

- 10.30-11.00 **Invited Lecture: MAIN NEMATODE PROBLEMS OF TOMATO**", *N. Greco and M. Di Vito*;
³CNR, Istituto per la Protezione delle Piante, Sezione di Bari, Via Amendola 122-D, 70126 Bari, Italy. ; e-mail: n.greco@ba.ipp.cnr.it
- 11.00-11.15 **EFFICACY OF THE AVAILABLE SOIL FUMIGANTS FOR THE CONTROL OF THE ROOT-KNOT NEMATODE, *MELOIDOGYNE INCOGNITA*, IN TOMATO IN PLASTIC-HOUSE.** *G. D'Errico¹, F. P. D'Errico² and N. Greco³*. ¹Dipartimento di Scienze animali vegetali e dell'ambiente, Università degli Studi del Molise, Campobasso, Italy. ²Dipartimento di Entomologia e Zoologia Agraria, Facoltà di Agraria – Università di Napoli "Federico II", Portici, Italy. ³CNR, Istituto per la Protezione delle Piante, Sezione di Bari, Via Amendola 122-D, 70126 Bari, Italy.
- 11.15-11.30 **IMPACT OF MS MEDIUM SUPPLEMENTED WITH CERTAIN AMINO ACIDS OR MINERAL SALTS ON TOMATO SUITABILITY TO INFECTION WITH *MELOIDOGYNE INCOGNITA* OR *PRATYLENCHUS PENETRANS* UNDER GREENHOUSE CONDITIONS.** *A. H. Nour EL-Deen¹*.
¹Nematology Research Unit, Agricultural Zoology Dept., Fac. Of Agric., Mansoura Univ. Egypt.
- 11.30-11.45 **NEW APPROACH OF RATING PATHOGEN-HOST SUITABILITY BETWEEN (A)-VIRULENT POPULATIONS OF ROOT-KNOT NEMATODES AND TOMATO.** *S. Molinari*. Institute of Plant Protection, National Council of Research (CNR), Via G. Amendola 122/D – 70126 Bari, Italy.
- 11.45-12.00 **EFFECTIVENESS OF FORMULATION FROM PEDALIACEAE PLANTS FOR THE CONTROL OF ROOT-KNOT NEMATODE *MELOIDOGYNE INCOGNITA* ON GREENHOUSE TOMATO.** *Trifone D'Addabbo¹, David Bernad², Eitan Martin², Vincenzo Radicci¹ and Giuseppe Lucarelli³* ¹ Istituto per la Protezione delle Piante - CNR, Via G. Amendola 165/a, 70126 Bari, Italy ² Daymsa (Desarrollo Agrícola y Minero S.A.), Camino de Enmedio 120, 50013 Zaragoza, Spain ³ HortoService, Via S. Pietro 3, 70016 Noicattaro(Bari), Italy.
- 12.00-12.15 **TOMATO ROOTSTOCKS FOR MANAGEMENT OF *MELOIDOGYNE*.** *Soledad Verdejo-Lucas¹, Laura Cortada¹, César Ornat² and Francisco Javier Sorribas²* ¹IRTA. Patologia Vegetal. Crta. de Cabrils Km 2. 08348 Cabrils, Barcelona, Spain. ²Departament d'Enginyeria Agroalimentària i Biotecnologia. Universitat Politècnica de Catalunya. Campus Baix Llobregat, Edifici ESAB, Esteve Terradas 8. 0886008860 Barcelona, Spain. E-mail: soledad.verdejo@irta.es
- 12.15-12.30 **EFFICACY OF CHLOROPICRIN AGAINST ROOT KNOT NEMATODES ON PROTECTED TOMATOES IN ITALY.** *¹C. Spotti, ²N.Vovlas, ¹E.Nobile and ¹M. Piardi.* ¹Tris International, Bologna. ²Istituto per la Protezione delle Piante, CNR Sezione di Bari.
- 12.30-12.45 **THE EFFECT OF CERTAIN LEGUME ON THE POPULATION LEVEL OF ROOT KNOT NEMATODE IN TOMATO FIELD.** *S.Haroon¹*. ¹Nematology and Biotechnology lab, Faculty of Agriculture Fayoum University²Fayoum, Egypt.
- 12.45-13.00 **EFFECT OF SOME PLANT EXTRACTS AND ESSENTIAL OIL ON ROOT-KNOT NEMATODES (*MELOIDOGYNE INCOGNITA*) OF TOMATO IN THE GHARB REGION (MAROCCO).** *F. Mokrini and F. A. Andaloussi*. National Institute for Agronomic Research, Laboratory of nematology, Kenitra Morocco.
- 13.00-14.00 Lunch**
- 14.15-14.45 Poster viewing

14.45-18.00: SESSION “TOMATO DISEASES CAUSED BY VIRUSES”

Chair: A. Ragozzino (Italy)

I.M. Hanssen (Belgium)

- 14.45-15.15 **Invited Lecture: IMPACT OF CLIMATE CHANGE AND INCREASING HUMAN ACTIVITIES ON TOMATO VIRUSES AND VIRUS-LIKE DISEASES INTRODUCTION AND EMERGENCE.** G. Parrella¹ and A. Crescenzi². ¹Istituto per la Protezione delle Piante, CNR, Via Università 133 – 80055 Portici (Napoli), Italy. ²Dip. Biologia, Difesa e Biotecnologia Agro-forestale - Università degli Studi della Basilicata Campus Macchia Romana - Viale dell’Ateneo Lucano, 10 85100 Potenza, Italy.
- 15.15-15.30 **A SURVEY OF TYLCD EPIDEMICS IN SARDINIA (ITALY) 3. ASSESSING THE RELATIVE ABUNDANCE OF TYLCV AND TYLCV ON TOMATO CROPS AND BAIT PLANTS.** M. Nannini¹, F. Foddi¹, R. Pintore¹, R. Pesci¹, F. Sanna¹, M. Testa¹ and G. P. Accotto.² ¹Agris Sardegna - DIRVE, V.le Trieste 111, 09123 Cagliari, Italy. ²CNR – Istituto Virologia Vegetale, Strada delle Cacce 73, 10135 Torino, Italy
- 15.30-15.45 **IDENTIFICATION AND MANAGEMENT OF TOMATO VIRUSES IN HAWAII.** L. Keith, L. Sugiyama, S. Tripathi, D. Gonsalves. Pacific Basin Agricultural Research Center, USDA/ARS, 64 Nowelo St., Hilo, HI 96720
- 15.45-16.00 **RAPID DISPLACEMENT AS A RESULT OF INTERACTION BETWEEN STRAINS OF TYLC IN REUNION ISLAND.** Péréfarres Frédéric^a, Lefeuvre Pierre^a, Hoareau Murielle^a, Thierry Magali^a, Becker Nathalie^b, Delatte Hélène^a, Reynaud Bernard^a, Dintinger Jacques^a, and Lett Jean Michel^a. ^aCIRAD, UMR53 PVBMT CIRAD-Université de la Réunion, Pôle de protection des plantes, 7 chemin de l’IRAT, 97410 Saint Pierre, Ile de la Réunion, France. ^bMuseum National d’Histoire Naturelle, Dept Systémique et Evolution, USM 601, CNRS UMR 5202 Origine, Structure et Evolution de la Biodiversité, 57 rue Cuvier, CP 50, 75005 Paris, France Emails : frederic.perefarres@cirad.fr and lett@cirad.fr
- 16.00-16.15 **TOMATO YELLOW LEAF CURL VIRUS IS EXPANDING TO NORTHERN LATITUDES.** J. Mozafari¹ and M. Shirazi^{1,2}. ¹Department of Genetics & National Plant Gene- Bank, Seed and Plant Improvement Institute, Mahdasht RD.,Karaj. ²Department of Plant Pathology, Faculty of Agriculture, Islamic Azad University Science and Research Campus, Tehran.
- 16.15-16.30 **Coffee break**
- 16.30-17.00 **Invited Lecture: CROSS-PROTECTION AS CONTROL STRATEGY FOR PEPINO MOSAIC VIRUS IN GREENHOUSE TOMATO.** F. De Nayer², A. Paeleman¹, K. Goen², L. Wittemans³ and E. Vandewoestijne³, A.C.R.C. Vanachter¹ and I.M. Hanssen^{1*}. ¹Scientia Terrae, Fortsesteenweg 30A, 2860 Sint-Katelijne-Waver, Belgium. ²Research Centre Hoogstraten, Voort 71, 2328 Hoogstraten, Belgium.. ³Research Station for Vegetable Production, Duffelsesteenweg 101, 2860 Sint-Katelijne-Waver, Belgium.
- 17.00-17.15 **THE EFFECT OF PEPINO MOSAIC VIRUS ON TOMATO YIELD .** J. Peters¹, R. Van Der Vlugt², A. Alfaro Fernandez³, R. Mumford¹, G. Bese⁴, G. Jones⁵ and M. Schenk.⁶ ¹Food and Environment Research Agency, York, UK. ²Plant Research International, Wageningen, the Netherlands. ³Universidad Politénica de Valencia, Valencia, Spain. ⁴Csongrád Megyei Mezőgazdasági Szakigazgatási Hivatal, Hungary; ⁵ADAS, UK. ⁶Wageningen UR Glastuinbouw, the Netherlands.
- 17.15-17.30 **CURRENT STATUS OF PepMV IN CROATIA.** A. Novak, J. Milanović and V. Kajić. Croatian Centre for Agriculture, Food and Rural Affairs, Institute for Plant Protection, Svetošimunska 25, 10 000 Zagreb, Croatia

- 17.30-17.45 **EPIDEMIOLOGY OF TOMATO SPOTTED WILT VIRUS IN JORDAN.** *A. S. Abeer¹ and M. Akef².*
¹National Center for Agricultural research and Extension. ²Plant protection Department, University of Jordan.
- 17.45-18.00 **TRANSMISSION AND MOLECULAR CHARACTERISATION OF TOMATO LEAF CURL VIRUS IN ANDHRA PRADESH, SOUTH INDIA.** *M. Rajasri¹, K. Vijaya lakshmi², V. Malathi⁴, R.D.V.J. Prasada Rao³ and M. Sujatha⁴.*
¹Seed Research and Technology Centre, ANGRAU, Rajendranagar, Hyderabad 500030, AP, India. Cell, ARI, ANGRAU, Rajendranagar, Hyderabad 500030, AP, India. ³National Bureau of Plant Genetic Resources (NBPGR) Regional Station, Hyderabad 500030, AP, India. ⁴Directorate of Oilseeds Research, Rajendranagar, Hyderabad 500030, AP, India.
- 18.00-18.15 **EFFECTIVENESS OF CYAZYPYRTM FOR MANAGING BEMISIA TABACI AND INTERFERING WITH TRANSMISSION OF TOMATO YELLOW LEAF CURL VIRUS ON TOMATO.** *D. J. Schuster¹, R. Caballero¹, N. A. Peres¹, H. E. Portillo², P. C. Marçon² and I B. Annan.²*
¹University of Florida/IFAS, Gulf Coast Research & Education Center, Wimauma, FL, USA. ²Dupont Crop Protection, Stine-Haskell Research Center, Newark, DE, USA .

July, Wednesday 28th, 2010

EXCURSION DAY

July, Thursday 29th, 2010

8.30-11.45: SESSION “DISEASE RESISTANCE”

Chair: J.W. Scott (USA)

C. Venkata Ramana (India)

- 8.30-9.00 **Invited Lecture: OBLIQUE RESISTANCE: THE HOST-PATHOGEN INTERACTION OF TOMATO AND THE BACTERIAL SPOT PATHOGEN.** *J. W. Scott, J.B. Jones and S.F. Hutton, University of Florida, Institute of Food and Agricultural Science, Gulf Coast Research and Education Center, Wimauma, FL 33598, USA*
- 9.00-9.15 **GENETIC ANALYSIS FOR PEANUT BUD NECROSIS VIRUS (PBNV) RESISTANCE IN TOMATO (*Lycopersicon esculentum* Mill.)** *C. Venkata Ramana*, P. Venkata Rao, R. D. V. J. Prasada Rao², S. Sudheer Kumar¹, I. P. Reddy and Y. N. Reddy* *College of Horticulture, Andhra Pradesh Horticultural University, Rajendranagar, Hyderabad-500 030, Andhra Pradesh, India, e-mail cvr.venkat@gmail.com ¹Department of Genetics & Plant Breeding, Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad-500 030, Andhra Pradesh, India ²National Bureau of Plant Genetic Resources, Regional Station, Rajendranagar, Hyderabad-500 030, Andhra Pradesh, India
- 9.15-9.30 **STUDY ON THE EFFECT OF STARVATION ON GENE EXPRESSION IN *P. LYCOPERSICI*.** *R. Caiazzo¹, E. Lahoz¹, A. Infantino² and A. Crescenzi³.* ¹CRA-CAT via P. Vitiello 108, 84018 Scafati Italy. ²CRA-PAV, Via G.C. Bertero, 22 00156 Roma. ³Dip. Biologia, Difesa e Biotecnologia Agro-forestale Università della Basilicata Campus Macchia Romana - Viale dell'Ateneo Lucano, 10 85100 Potenza, Italy.

- 9.30-9.45 **TRANGENIC TOMATO PLANTS EXPRESSING PR5-PROTEIN GENES DEMONSTRATED DISEASE RESISTANCE AGAINST *PHYTOPHTORA INFESTANS* AND *XANTHOMONAS CAMPESTRIS* PV. *VESICATORIA*.** *I. V. Korneeva*¹, *N.V.Varlamova*¹, *A. Pushin*², *A. P. Firsov*², *G. F. Monakhos*³, *A. Motamedi*³, *F. S. Djalilov*³ and *S. V. Dolgov*.¹⁻² ¹ Department of Genetic Engineering, All-Russia Research Institute of Agricultural Biotechnology, 127550, Timiryasevskaya 42, Moscow, Russia. ²Artificial Climate Station "Biotron", Branch of Shemyakin Institute of Bioorganic Chemistry, 142290, Pushchino, Moscow region, Russia. ³Moscow Agricultural Academy, 127550, Timiryasevskaya 49, Moscow, Russia.
- 9.45-10.00 ***SOLANUM CHEESMANNII* TOMATO GERMPLASM ASSESSMENT FOR VIRUS DISEASE RESISTANCE AND BIOLOGICAL VALUE.** *G. Pasev*¹, *D. Kostova*¹, *G. Pevicharova*¹, *D. Ganeva*¹ and *D. Zamir*.² ¹Maritsa Vegetable Crops Research Institute (VCRI), 32 Brezovsko shosse, 4003 Plovdiv, Bulgaria. ²The Hebrew University of Jerusalem Faculty of Agriculture P.O. Box 12, Rehovot 76100 Israel .
- 10.00-10.15 **BACTERIAL SPOT RACE T4 RESISTANCE AND YIELD ENHANCEMENT IN TOMATOES CONFERRED BY THE PEPPER *BS2* GENE IN FLORIDA FIELD TRIALS.** *J. W. Scott*¹, *R. E. Stall*², *D. Dahlbeck*³, *G. E. Vallad*¹, *B. J. Staskawicz*³ and *J. B. Jones*.² ¹University of Florida, Gulf Coast Research & Education Center, 14625 CR 672, Wimauma, FL, 33598, USA. ²University of Florida, Dept. of Plant Pathology, 1453 Fifield Hall, Gainesville, FL, 32611, USA. ³University of California, Berkeley, Plant and Microbial Biology, 111 Koshland Hall, Berkeley, CA 94720 USA.
- 10.15-10.30 **RESISTANCE TESTS TO DISEASES OF TOMATO VARIETIES FOR LISTING IN COMMON CATALOGUE.** *L. Sigillo*¹ and *R. Bravi*.¹ ¹Ente Nazionale Sementi Elette (Sez. Battipaglia) – SS 18 km 77.700 – 84091 Battipaglia (SA).
- 10.30-10.45 **Coffee break**
- 10.45-11.00 **TOWARDS DEVELOPING BACTERIAL WILT RESISTANCE IN TOMATO USING ANTHRACNOSIS CULTURE.** *T. Rana*, *R. Rathour* and *T. Sharma*. CSK Himachal Pradesh Agricultural University, Palampur -176061, Himachal Pradesh, India.
- 11.00-11.15 **THE STUDY ABOUT THE LOCAL TOMATO GENOTYPES' GENETICAL VARIATIONS AND RESISTANCE TO TSWV BY USING DIFFERENT METHODS.** *A. Oguz*¹, *S. Ellialtioglu*², *H. Yilbi*³, *N. Celik*¹, *F. Caliskan*⁴, *M. Kamberoglu*⁴, *A. Kabas*¹ and *A. Zengin*.¹ ¹Batı Akdeniz Agricultural Research Institute- Antalya, TURKIYE. (ersoyasu@yahoo.com) ²Ankara University, Faculty of Agriculture, Horticulture Department Ankara, TURKIYE. ³Ege University, Faculty of Agriculture. Horticulture Department Izmir, TURKIYE. ⁴Cukurova University, Faculty of Agriculture, Plant Protection Department-Adana, TURKIYE.
- 11.15-11.30 ***FUSARIUM OXYSPORUM* F.SP *RADICIS LYCOPERSICI* RESISTANCE INHERITANCE IN TOMATO AND ITS ATTITUDE IN TURKEY.** *A. Kabas*¹, *N. Mutlu*², *H. İlbi*³, *A. Ünlu*¹, *F. Boyacı*¹, *A. Oguz*¹ and *S. Zengin*.¹ ¹Bati Akdeniz Agricultural Research Institute. ²Akdeniz University Faculty of Agriculture. ³Ege University Faculty of Agriculture Department of Horticulture.
- 11.30-11.45 **SCREENING OF TOMATO GENOTYPES AGAINST EARLY BLIGHT (*Alternaria solani*) BY DETACHED LEAF METHOD** *M.R.Lohith*, *K.Chandrashekar Reddy*, *C.Venkata Ramana*, *P.Venkata Rao*, *D.Lokanadha Reddy**, and *K. Ravendra*. Reddy College of Horticulture, Andhra Pradesh Horticultural University, Rajendranagar, Hyderabad-500 030, Andhra Pradesh, India, e-mail cvr.venkat@gmail.com *Department of Genetics & Plant Breeding, Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad-500 030, Andhra Pradesh, India

11.45-12.45: SESSION "ABIOTIC STRESSES"

Chair: Rodrigues R. (Brasil)

M. M. Giuliani (Italy)

11.45-12.15	Invited Lecture: PROCESSING TOMATO CULTIVATED UNDER WATER DEFICIT CONDITIONS: THE EFFECT OF AZOXYSTROBIN. <i>M. M. Giuliani¹, E. Nardella¹, M. Quitadamo², G. Gatta¹ and A. De Caro.</i> ¹ DiSACD, Facoltà di Agraria, Università degli Studi di Foggia, via Napoli, 25 - 71100 Foggia (Italy). ² Centro per la Sperimentazione e Valorizzazione delle Colture Mediterranee (Syngenta), s.s. 16 km 664,600 - 71100 Foggia (Italy).
12.15-12.30	VERMICOMPOST SUBSTITUTION REDUCES RUSSETING AND BLOSSOM END ROT (BER) AND IMPROVES MARKETABLE FRUIT YIELD AND QUALITY OF TOMATO. <i>R. Singh^{1&2} and A. Kumar.</i> ² ¹ Central Institute of Post Harvest Engineering and Technology, Abohar-152116, Punjab, India. ² Directorate of Water management, Bhubaneswar-751 023, Orissa, India.
12.30-12.45	EFFECT OF SEED PRIMING ON PHYSIOLOGICAL CHANGES IN TOMATO GROWN UNDER SALT STRESS. <i>P. Theerakulpisut¹, W. Lontom¹, J. Kulya¹, S. Bunnag¹ and S. Techawongsatien.</i> ² ¹ Department of Biology, Faculty of Science, Khon Kaen University, Khon Kaen 40002, Thailand. ² Department of Plant Science and Agricultural Resources, Faculty of Agriculture, Khon Kaen University, Khon Kaen 40002, Thailand.
12.45-13.00	HEAT STRESS EFFECTS ON PHOTOSYNTHETIC ACTIVITY OF HEIRLOOM TOMATOES. <i>R. Rodrigues¹, R. Jeronimo Jr¹, C. Bento¹, F. Pinto¹, D. Ribeiro¹, T.Vieira¹ and A. Vitória.</i> ¹ Universidade Estadual do Norte Fluminense Darcy Ribeiro, Av. Alberto Lamego, 2000, Parque Califórnia, Campos dos Goytacazes, RJ, CEP 28013-602, Brazil.
13.00-14.00	Lunch
14.00-15.30	Poster viewing
15.30-16.00	Book Presentation <i>Il Pomodoro</i>, Published by Coltura&Cultura, Bayer CropScience, ART Servizi Editoriali, Bologna (2010). <i>Vitangelo Magnifico</i> - Consiglio per la Ricerca e la sperimentazione in Agricoltura. Unità di ricerca per i sistemi colturali degli ambienti caldo-aridi. Via Celso Ulpiani, 5- 70125 BARI Italy
16.00-16.30	Coffee break
Chair: Hikmet Saygili (Turkey)	
Silvana Nicola (Brasil)	
16.30-17.30	Business meeting (ISHS members): choice of location of next 4 th ISTD.
20.30	SOCIAL DINNER

July, Friday 30th, 2010

8.30-12.35: SESSION "DISEASE MANAGEMENT"

Chair: N. Tosun (Turchia)

E. Lahoz (Italy)

8.30-9.00	Invited Lecture: EFFICACIES OF SOLARIZATION COMBINATED WITH METAM SODIUM AND HYDROGEN PEROXIDE IN CONTROL OF <i>FUSARIUM OXYSPORUM</i> F. SP. <i>RADICIS-LYCOPERSICI</i> AND <i>CLAVIBACTER MICHIGANENSIS</i> SUBSP. <i>MICHIGANENSIS</i> IN TOMATO
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- GREENHOUSE.** *E. K. Yuce and Prof. Dr. N. Tosun.* Department of Plant Protection, Faculty of Agriculture, Ege University, Bornova, Izmir, 35100, Turkey
- 9.00-9.15 **A DIELECTRIC DIPOLAR SCREEN WITH OPPOSITELY POLARIZED INSULATORS FOR PROTECTING TOMATO SEEDLINGS ON A NURSERY HYDROPONIC CULTURE BED FROM WHITEFLIES.** *Y. Matsuda¹, T. Nonomura¹, J. Kimbara² and H. Toyoda¹.* ¹Laboratory of Plant Protection and Biotechnology, Department of Agricultural Science and Technology, Kinki University, Nara 631-8505, Japan. ²Research Institute, Kagome Company, Tochigi 329-2762, Japan.
- 9.15-9.30 **THE IMPACT OF THE CLIMATE CHANGE ON THE WIDESPREAD AND EPIDEMICS OF SOME TOMATO DISEASES DURING THE LAST DECADE IN EGYPT.** *M. Fahim, M. Hassanein and A. Abou-Hadid.* Central Laboratory Agricultural Climate, Dokki, 12411 Giza, Egypt. President of Agricultural Research Center, 12619 Giza, Egypt.
- 9.30-9.45 **UTILIZATION OF GRAFTED TOMATO SEEDLINGS FOR OPEN FIELD PRODUCTION.** *J. Freeman, T. McAvoy and S. Rideout.* Virginia Polytechnic Institute and State University, Eastern Shore Agricultural Research and Extension Center, 33446 Research Drive, Painter, VA 23420. Department of Horticulture, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061.
- 9.45-10.0 **REDUCTION OF *RALSTONIA SOLANACEARUM* POPULATION IN SOIL WITH THE USE OF SUSCEPTIBLE CULTIVAR OF TOMATO.** *T. Arwiyanto, H. Semangur and B.N. Hidayah.* Department of Crop Protection, Gadjah Mada University, Jl Flora No 1 Bulaksumur, Yogyakarta, Indonesia 55281.
- 10.0-10.15 **EPIDEMIOLOGY OF *TOMATO YELLOW LEAF CURL VIRUS* IN RELATION TO INTERCROPPING AND INSECTICIDAL SPRAY REGIMES ON THE B. TABACI UNDER FIELD CONDITIONS.** *F. Fargalla¹ and M. Fahim².* ¹Plant Protection Research Institute, Agricultural Research Center, Dokki, Giza, Egypt. ²Central Laboratory for Agricultural Climate, Agricultural Research Center, Dokki, 12411 Giza, Egypt .
- 10.15-10.35 Coffee break**
- 10.35-10.50 **BIOLOGICAL CONTROL OF *BOTRYTIS CINEREA* IN TOMATO.** *Rudi Aerts¹, Kathleen Heyens¹, Bjorn Seels¹, Liesbeth Vogels¹, and Bruno P.A. Cammue²* ¹Research Group Sustainable Crop Protection, Katholieke Hogeschool Kempen, Kleinhoefstraat 4, 2440 Geel, Belgium, ²Centre of Microbial and Plant Genetics, Katholieke Universiteit Leuven, Kasteelpark Arenberg 20, 3001 Leuven, Belgium,
- 10.50-11.05 **CONTROL OF *PYRENOCHAETA LYCOPERSICI* AND *MELOIDOGYNE INCOGNITA* ON TOMATO BY ECO-COMPATIBLE TREATMENTS.** *M. Gallo¹, F. Ciccarese¹ and N. Sasanelli^{2,1}* ¹Department of Biology and Plant Pathology, University of Bari, Italy. ²Institute for Plant Protection, C.N.R., Section of Bari, Italy.
- 11.20-11.35 **BIOLOGICAL CONTROL OF SOIL BORN DISEASES OF TOMATO (*LYCOPERSICON ESCULENTUM* MILL.) CAUSED BY *PYTHIUM APHANIDERMATUM*, *FUSARIUM OXYSPORUM* F. SP. *RADICIS-LYCOPERSICI* AND *MACROPHOMINA PHASEOLI* IN USING EXTRACTS OF *COLA NITIDA* AND *RICINUS COMMUNIS* IN GREENHOUSE IN CÔTE D'IVOIRE.** *S. Soro^{1,3*}, L. Fondio², D. Kone³, G. N. Zirihi⁴, M. Zouzou³, Y. J. Kouadio¹ and S. Ake³.* ¹Laboratoire de Biologie et Amélioration des Productions Végétales, Université d'Abobo-Adjamé, 02 BP 801 Abidjan 02. ²Centre National de Recherche Agronomique (Cnra), Station d'Anguédédou, 01 BP 1740 Abidjan 01. ³Laboratoire de Physiologie et Pathologie Végétale, Université de

Cocody, 22 BP 582 Abidjan 22. ⁴Laboratoire de Botanique, Université de Cocody, 22 BP 582 Abidjan 22.

- 11.35-11.50 **EPIDEMIOLOGY, ETIOLOGY AND CONTROL OF TOMATO POSTHARVEST SOUR ROT ON VIRGINIA'S EASTERN SHORE.** *S. Rideout¹ and C. Waldenmaier².* ¹Virginia Polytechnic Institute and State University, Eastern Shore Agricultural Research and Extension Center and Department of Plant Pathology, Physiology and Weed Science, Painter, VA, USA . ²Virginia Polytechnic Institute and State University, Eastern Shore Agricultural Research and Extension Center, Painter, VA, USA.
- 11.50-12.05 **DOES *CLAVIBACTER MICHIGANENSIS* SUBSP. *MICHIGANENSIS* HAVE RESISTANCE TO COPPER IN CHINA?** *Na JIANG, Laixin LUO** and *Jianqiang LI.* Department of Plant Pathology, China Agricultural University, Beijing, P. R. CHINA, 100193.
- 12.05-12.20 **EFFICACY OF BACTERIAL ANTAGONISTS FROM USED ROCKWOOL SOILLESS SUBSTRATES AND DIFFERENT COMMERCIAL PRODUCTS AGAINST FUSARIUM WILT ON TOMATO.** *S. Krishnamoorthy, G. Gilardi, A. Garibaldi and M. L. Gullino.* AgriInnova - Centre of Competence for the Innovation in the Agro-Environmental Sector, University of Torino, Via Leonardo da Vinci 44, 10095 Grugliasco, Turin, Italy.
- 12.20-12.35 **BIOLOGICAL CONTROL OF TOMATO STEM CANKER DISEASE CAUSED BY *BOTRYTIS CINEREA*, USING *TRICHODERMA* ISOLATES.** *A. Eivazi and M. J. Soleimani.** Dept. of Plant Protection, College of Agriculture, Bu-Ali Sina University, Hamadan, Iran

POSTER SESSION

Open from Monday 26th till Thursday 29th

- P1. THE JASMONATE SIGNALING PATHWAY IN TOMATO REGULATES SUSCEPTIBILITY TO A TOXIN-DEPENDENT NECROTROPHIC PATHOGEN *ALTERNARIA ALTERNATA*.** *Motoichiro Kodama,^{1,2} Mayumi Egusa,¹ and Hiroshi Otani¹* ¹Laboratory of Plant Pathology, Faculty of Agriculture, Tottori University, Tottori 680-8553, Japan, ²Fungus/Mushroom Resource and Research Center, Faculty of Agriculture, Tottori University, Tottori 680-8553, Japan.
- P2. SOIL-BORNE PATHOGENS ASSOCIATED TO NEW CROPS OF TOMATO "CHERRY" IN THE PROVINCE OF GRANADA (SPAIN).** *Miquel de Cara,¹ Daniel Palmero,² Moisés Pérez-Vargas¹, Milagrosa Santos-Hernández¹, Julio Gómez-Vázquez³ and Julio C. Tello-Marquina¹* ¹Departamento Producción Vegetal. Universidad de Almería, Ctra. Sacramento s/n. 04120 Almería (Spain), ² Escuela Universitaria de Ingeniería Técnica Agrícola, Ciudad Universitaria s/n. 28040 Madrid (Spain), ³ Instituto de Investigación y Formación Agraria y Pesquera, Camino San Nicolás s/n, La Mojonera (Spain).
- P3. MOLECULAR STRATEGIES FOR THE STUDY OF TOMATO-PYRENOCHAETA LYCOPERSICI INTERACTION.** *Maria Teresa Valente¹, Maria Aragona^{1,2}, Justyna Milc³, Nicola Pecchioni³ and Alessandro Infantino¹* ¹CRA-PAV, Centro di Ricerca per la Patologia Vegetale, Via C.G. Bertero 22, 00156 Roma, Italy; ²CRA-RIS, Unità di Ricerca per la Riscoltura, s.s. per Torino km 2,5 13100 Vercelli, Italy; ³Università di Modena e Reggio Emilia, Dipartimento di Scienze Agrarie e degli Alimenti, Via Kennedy 17/19, Reggio Emilia, Italy.
- P4. INCIDENCE OF FUNGAL DISEASES ON ORGANICALLY GROWN TOMATO FRUITS.** *Ingrid Bender.* Jõgeva Plant Breeding Institute, Jõgeva alevik, 48309 Estonia.

- P5. EFFECTIVENESS OF MULCHING PLASTIC FILM TO CONTROL CORKY ROT AND SOME VIRUSES OF TOMATO.** *Francesco Lops, Antonia Carlucci, Ippolito Camele*, Maria Luisa Raimondo and Salvatore Frisullo.* Dipartimento di Scienze Agro-ambientale, Chimica e Difesa Vegetale (DiSACD), Università degli Studi di Foggia, Via Napoli, 25, 71100 Foggia, *Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali, Università degli Studi della Basilicata, Viale dell'Ateneo Lucano, 10, 85100 Potenza.
- P6. FUNGICIDE RESISTANCE MANAGEMENT GUIDELINES FOR CONTROL OF IMPORTANT TOMATO DISEASES IN THE MID-ATLANTIC AND NORTHEAST REGIONS OF THE US.** ¹ *Steven L. Rideout*, ² *Christian A. Wyenandt*, ³ *Beth K. Gugino*, ⁴ *Margaret T. McGrath*, ⁵ *Kathryne L. Everts* and ⁶ *Robert P. Mulrooney* ¹ Assistant Professor of Plant Pathology, Eastern Shore AREC, Virginia Polytechnic Institute and State University, ² Extension Specialist in Vegetable Pathology, Department of Plant Biology and Plant Pathology, Rutgers University, New Jersey Agricultural Experiment Station, ³ Assistant Professor of Plant Pathology, Department of Plant Pathology, The Pennsylvania State University, ⁴ Associate Professor, Department of Plant Pathology and Plant-Microbe Biology, Long Island HREC, Cornell University, ⁵ Professor of Plant Pathology, Plant Sciences and Landscape Architecture, University of Maryland/Plant and Soil Sciences Department, University of Delaware, ⁶ Extension Plant Pathologist, Plant and Soil Sciences Department, University of Delaware
- P7. CHARACTERIZATION OF *PSEUDOMONAS SYRINGAE* PV. *TOMATO* POPULATIONS FOR EFFECTOR GENES** *M. Zaccardelli*¹, *F. Campanile*¹, *B. A. Vinatzer*² ¹C.R.A.- Centro di Ricerca per l'Orticoltura, Azienda agraria e laboratori di Battipaglia. SS 18 n° 204, 84091, Battipaglia (SA), Italy. ²Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Fralin Biotechnology Center, Blacksburg, USA. (ZACC. 3)
- P8. MOLECULAR EPIDEMIOLOGY OF *PSEUDOMONAS SYRINGAE* PV. *TOMATO*.** *Francesco Campanile and Massimo Zaccardelli.* CRA-Centro di Ricerca per l' Orticoltura, Azienda agraria e laboratori di Battipaglia. SS 18 n. 204, 84091, Battipaglia (SA), Italy.
- P9. OCCURRENCE OF *XANTHOMONAS* SPECIES CAUSING BACTERIAL SPOT IN FRESH MARKET TOMATO FIELDS IN BRAZIL.** *Roberta C. Pereira*¹, *Edivânio R. Araújo*¹, *Alice M. Quezado-Duval*², and *Marisa A.S.V. Ferreira*¹. ¹Departamento de Fitopatologia, Universidade de Brasília, CEP 70910-900, Brasília-DF, Brazil. ²Embrapa Hortaliças, BR060, Km 9, 70359-970, Brasília-DF, Brazil.
- P10. MOLECULAR IDENTIFICATION AND CHARACTERIZATION OF PHYTOPLASMA CAUSING STOLBUR DISEASE ON TOMATO IN BURSA, TURKEY.** *Seckin Eroglu*¹, *Fikretin Sahin*^{2,1,2} Yeditepe University, Yeditepe University, Istanbul, Turkey
- P11. GENETIC DIVERSITY AND PATHOGENICITY OF *RALSTONIA SOLANACEARUM* STRAINS ENTERING NORTH AMERICA.** *Ana M. Bocsanczy*¹, *Ute Achenbach*², *Arianna Mangravita – Novo*³ and *David J. Norman*^{1,1} Department of Plant Pathology, University of Florida, IFAS, Mid-Florida Research and Education Center, 2725 Binion Rd., Apopka, FL 32703, USA ²Current address: Institute of Molecular Plant Physiology and Biotechnology of Plants (IMBIO), University of Bonn, Kirschallee 1, D-53115 Bonn, Germany. ³Current address: Burnham Institute for Medical Research at Lake Nona 6400 Sanger Road, Orlando, FL 32827, USA.
- P12. EFFECT OF TEMPERATURE ON PATHOGENICITY COMPONENTS OF TOMATO BACTERIAL SPOT AND COMPETITION BETWEEN *XANTHOMONAS PERFORANS* AND *X. GARDNERI*.** *Edivânio R. Araújo*¹, *Roberta C. Pereira*¹, *Antonio W. Moita*², *Marisa A.S.V. Ferreira*¹, *Adalberto C. Café-Filho*¹, and *Alice M. Quezado-Duval*². ¹Departamento de Fitopatologia, Universidade de Brasília, CEP 70910-900, Brasília-DF, Brazil. ²Embrapa Hortaliças, BR060, Km 9, 70359-970, Brasília-DF, Brazil.

- P13. THE H₂O₂-REGULATED EP5C GENE ENCODES A PEROXIDASE REQUIRED FOR BACTERIAL SPECK SUSCEPTIBILITY IN TOMATO.** *Vicente Ramírez and Pablo Vera* ⁽¹⁾Instituto de Biología Molecular y Celular de Plantas (IBMCP, -UPV-CSIC). Camino de Vera s/n, Valencia, Spain.
- P14. DETECTION OF *CLAVIBACTER MICHIGANENSIS* SUBSP. *MICHIGANENSIS* FROM TOMATO PLANTS AND SEEDS USING ELISA, IF AND PCR WITH COMMERCIAL AND OWN PRIMERS.** *Ivan Mraz*¹, *Blanka Kokoskova*², *Pavel Beran* ¹Department of Plant Virology, Institute of Plant Molecular Biology, Biological Centre of Academy of Sciences of the Czech Republic, 370 05 České Budějovice, Czech Republic ²Laboratory of Diagnostics and Epidemiology of Microorganisms, Plant Medicine Division, Crop Research Institute, 161 06 Prague 6, Czech Republic
- P15. IN VITRO ACTIVITY OF SELECTED PESTICIDES ON POTENTIAL SPRAY WATER BACTERIAL CONTAMINANTS.** *Michael Mahovic*¹ and *Steve Rideout*² ¹United States Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA. ²Virginia Polytechnic Institute and State University, Eastern Shore Agricultural Research and Extension Center and Department of Plant Pathology, Physiology and Weed Science, Painter, VA, USA.
- P16. INFECTIONS OF BACTERIAL SPOT ON PROCESSING TOMATO IN SOUTHERN ITALY.** *Massimo Zaccardelli*, *Francesco Campanile*, *Domenica Villecco* and *Mario Parisi* ¹C.R.A.- Centro di Ricerca per l'Orticoltura, Azienda agraria e laboratori di Battipaglia. SS 18 n° 204, 84091, Battipaglia (SA), Italy. (ZACC. 7)
- P17. CONTROL OF ROOT-KNOT NEMATODES WITH BIOMASSES FROM *MEDICAGO SATIVA* AND THEIR BIOACTIVE SAPONINS.** *Paola Leonetti*¹, *Trifone D'Addabbo*¹ and *Pinarosa Avato*² ¹Istituto per la Protezione delle Piante - CNR, Via G. Amendola 165/a, 70126 Bari, Italy² Dipartimento Farmaco-Chimico, Università di Bari, Via Orabona 4, 70125 Bari, Italy.
- P18. NATURAL PRODUCTS FOR NEMATODE MANAGEMENT IN TOMATOES.** *B. B. Westerdahl*¹ and *J. D. Radewald*² ¹Department of Nematology, University of California, Davis, CA 95616, ²Department of Nematology, University of California, Riverside, CA 92651
- P19. SUPPRESSIVE EFFECT OF SOIL AMENDMENTS WITH COMPOSTED OLIVE MILL WASTES ON ROOT-KNOT NEMATODES ON TOMATO.** *Sasanelli N.*¹, *D'Addabbo T.*¹, *Mancini L.*² ¹Istituto per la Protezione delle Piante, C.N.R., Via G. Amendola 122/D, 70126 Bari, Italy; ²Dipartimento di Scienze delle Produzioni Vegetali, Università degli Studi di Bari, Via G. Amendola 165/A, 70126 Bari, Italy
- P20. EFFECTIVENESS OF FORMULATIONS FROM *SESAMUM* SPP. FOR THE CONTROL OF ROOT-KNOT NEMATODE *MELOIDOGYNE INCOGNITA* ON GREENHOUSE TOMATO.** *D'addabbo Trifone*, *Martin Eitan*, *Radicci Vincenzo*, *Lucarelli Giuseppe*, *Bernard David*. ¹ Istituto per la Protezione delle Piante - CNR, Via G. Amendola 122/D, 70126 Bari, Italy ² Daymsa (Desarrollo Agrícola y Minero S.A.), Camino de Enmedio 120, 50013 Zaragoza, Spain ³ HortoService, Via S. Pietro 3/D, 70016 Noicattaro (Bari), Italy.
- P21. REACTION OF ELITE TOMATO (*SOLANUM LYCOPERSICUM* L.) GERMPLASM AGAINST TOMATO LEAF CURL VIRUS DISEASE.** *Amit Gaikwad*¹, *D S Cheema*¹, *M S Dhaliwal*² and *Abhishek Sharma*¹ ¹Department of Vegetable Crops, Punjab Agricultural University, Ludhiana – 141004, India. ²AVRDC-The World Vegetable Center, C/o ICRAF, PO Box 16317, Yaounde, Cameroon.
- P22. MOLECULAR DETECTION AND CHARACTERIZATION OF *LEAF CURL VIRUS* INFECTING TOMATO IN PUNJAB, INDIA.** *Amit Gaikwad*¹, *Abhishek Sharma*¹ and *D S Cheema*¹ ¹Department of Vegetable Crops, Punjab Agricultural University, Ludhiana – 141004, India

- P23. A SURVEY OF TYLCD EPIDEMICS IN SARDINIA (ITALY) 2. MONITORING THE OCCURRENCE OF DISEASE-ASSOCIATED VIRUSES ON WEEDS AND NON-TOMATO CROPS.** *Mauro Nannini¹, Marco Testa¹, Chiara Dellacroce² and Gian Paolo Accotto²* ¹Agris Sardegna - DIRVE, V.le Trieste 111, 09123 Cagliari, Italy; ²CNR – Istituto Virologia Vegetale, Strada delle Cacce 73, 10135 Torino, Italy.
- P24. A SURVEY OF TYLCD EPIDEMICS IN SARDINIA (ITALY) 1. ESTIMATING THE ENVIRONMENTAL INOCULUM AND CORRELATING IT WITH WHITEFLY POPULATION TRENDS.** *Mauro Nannini¹, Francesco Foddi¹, Giovanni Murgia¹, Riccardo Pesci¹, Francesco Sanna¹, Marco Testa¹ and Gian Paolo Accotto²* ¹Agris Sardegna - DIRVE, V.le Trieste 111, 09123 Cagliari, Italy; ²CNR – Istituto Virologia Vegetale, Strada delle Cacce 73, 10135 Torino, Italy
- P25. EVALUATION OF RESISTANCE TO TSWV AND AGRONOMIC BEHAVIOUR OF SOME TOMATO GENOTYPES IN SOUTHERN ITALY.** *Ippolito Camele¹, Luciana Altieri², Vito Miccolis², Gian Luigi Rana¹ and Vincenzo Candido²* ¹Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali, ²Dipartimento di Scienze dei Sistemi Colturali, Forestali e dell'Ambiente, Università degli Studi della Basilicata - 85100 Potenza (Italy).
- P26. CONSTRUCTION OF INFECTIOUS CLONES OF TOMATO LEAF CURL PALAMPUR VIRUS: A NEW BEGOMOVIRUS SPECIES CAUSING SEVERE DISEASE IN TOMATO AND CUCURBITS.** *Yogesh Kumar*, Vipin Hallan and A. A. Zaidi.* Plant Virus Lab, Institute of Himalayan Bioresource Technology (CSIR), Palampur, Himachal Pradesh, 176061.
- P27. EFFECT OF ULTRAVIOLET-BLOCKING PLASTIC FILMS ON INSECT VECTORS OF VIRUS DISEASES INFESTING TOMATO (LYCOPERSICON ESCULENTUM) IN GREENHOUSE.** *López-Marin, J, Rodríguez, M, González, A* Departamento de Hortofruticultura. Instituto Murciano de Investigación y Desarrollo Agrario y Alimentario. Estación Sericícola. C/Mayor s/n. 30150. La Alberca. Murcia, Spain.
- P28. INCIDENCE AND MOLECULAR CHARACTERIZATION OF ALFALFA MOSAIC VIRUS ISOLATES INDUCING “CALICO” MOSAIC IN FIELD TOMATO CROPS OF SOUTHERN ITALY** *Giuseppe Parrella¹, Mario Parisi², Antonio Ragozzino³* ¹Istituto per la Protezione delle Piante, CNR, Via Università 133 – 80055 Portici (Napoli), Italy ²C.R.A.- Centro di Ricerca per l'Orticoltura, Azienda agraria e laboratori di Battipaglia. SS 18 n° 204, 84091, Battipaglia (SA), Italy ³Dipartimento di Arboricoltura, Botanica e Patologia Vegetale, Via Università 100 – 80055 Portici (Napoli), Italy
- P29. BIOLOGICAL AND MOLECULAR CHARACTERIZATION OF A PARIETARIA MOTTLE VIRUS ISOLATE DETECTED ON A TOMATO CROP IN SOUTHERN ITALY.** *Giuseppe Parrella¹, Nadia Acanfora¹, Aniello Crescenzi²* ¹Istituto per la Protezione delle Piante del CNR, Via Università 133, 80055 Portici (NA), Italy ²Dipartimento di Biologia, Difesa e Biotecnologie Agroforestali, Università degli Studi della Basilicata, Via dell'Ateneo Lucano 10, IT-85100 Potenza, Italy.
- P30. FIRST RECORD OF COLUMNEA LATENT VIROID (CLVd) IN TOMATO IN ITALY.** *Giuseppe Parrella¹, Rosa Pacella² and Aniello Crescenzi²* ¹Istituto per la Protezione delle Piante del CNR, Via Università 133, 80055 Portici (NA), Italy. e-mail: parrella@ipp.cnr.it ²Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali, Università degli Studi della Basilicata, Via dell'Ateneo Lucano 10, 3A310, 85100 Potenza, Italy. E-mail: crescenzi@unibas.it
- P31. DEVELOPMENT AND INTER-LABORATORY EVALUATION OF A REAL- TIME ASSAY FOR POSPIVIROID DETECTION IN TOMATOES.** *Wendy Monger¹, Jenny Tomlinson¹, Jeff Peters¹, Mojca Virscek Marn², Irena Mavric Plesko², Valérie Molinero-Demilly³, Xavier Tassus³, Ellis Meekes⁴, Marcel Toonen⁴, Lambros Papayiannis⁵, Zoila Perez-Egusquiza⁶, Natasa Mehle⁷, Claudia Jansen⁸, Steen Lykke Nielsen⁹.* ¹Food and Environment Research Agency, Sand Hutton, York, UK, YO41 1LZ, ²Agricultural Institute of Slovenia,

Hacquetova 17, 1001 Ljubljana, Slovenia, ³Laboratoire national de la protection des végétaux, 7 rue Jean Dixméras, FR - 49044 Angers, Cedex 01, France, ⁴Naktuinbouw, Sotaweg 22, 2371 GD Roelofarendsveen, The Netherlands, ⁵Agricultural Research Institute, P.O. Box 22016, 1516 Nicosia, Cyprus, ⁶MAF Biosecurity New Zealand, 231 Morrin road, St Johns, Auckland 1072, Auckland 1140, New Zealand, ⁷National institute of biology, Večna pot 111, SI-1000, Ljubljana, Slovenia, ⁸Plant Protection Service, P.O. Box 9102, 6700 HC Wageningen, the Netherlands, ⁹Aarhus University, Faculty of Agricultural Sciences, Forsøgsvej 1, DK-4200 Slagelse, Denmark

- P32. IS COLUMNEA LATENT VIROID SEED TRANSMITTED?** *Val Harju¹, Wendy Monger,¹ Tom Nixon¹, Anna Skelton¹, Stephen Forde¹, Samantha Bennett¹, Mark Daly¹, Adrian Fox¹* The Food and Research Environment Agency, Sand Hutton, York, YO41 1LZ, UK.
- P33. PUTATIVE ROLE OF ANTIOXIDANT ACTIVITY OF HIGH PIGMENT TOMATO CULTIVARS IN RESISTANCE AGAINST BOTRYTIS CINEREA POST-HARVEST INFECTION** *Catello Pane¹, Mario Parisi¹, Giulia Graziani², Vincenzo Fogliano², and Massimo Zaccardelli¹*.¹CRA-Centro di Ricerca per l'Orticultura, Azienda agraria e laboratori di Battipaglia. SS 18 n. 204, 84091, Battipaglia (SA), Italy. ²Dipartimento di Scienza degli Alimenti – Università di Napoli "Federico II", via Università 100 – 80055 Portici (NA).
- P34. SUSCEPTIBILITY, IN OPEN FIELD, OF PROCESSING AND CHERRY TOMATO CULTIVARS TO BACTERIAL SPECK.** *Massimo Zaccardelli, Mario Parisi, Francesco Campanile and Domenico Perrone* CRA-Centro di Ricerca per l'Orticultura, Azienda agraria e laboratori di Battipaglia. SS 18 n. 204, 84091, Battipaglia (SA), Italy. (Zacc 4).
- P35. ECOPHYSIOLOGY OF SUSCEPTIBLE AND RESISTANT TOMATO PLANTS INOCULATED WITH FUSARIUM OXYSPORUM F.SP. LYCOPERSICI.** *Cristina Nali¹, Giacomo Lorenzini¹ and Lucia Guidi²*
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- P36. INVESTIGATING SOURCES OF RESISTANCE IN TOMATO AND WILD RELATIVES TO CROWN AND ROOT ROT CAUSED BY PHYTOPHTHORA CAPSICI.** *Lina M. Quesada-Ocampo, and Mary K. Hausbeck* Department of Plant Pathology, Michigan State University, East Lansing, MI 48824-1312.
- P37. TOMATO BREEDING RESISTANCE TO LATE BLIGHT AT WESTERN MEXICO.** *José Luis Martínez-Ramírez¹, Luis Javier Arellano-Rodríguez¹, Eduardo Rodríguez-Guzmán¹, José Ron-Parra¹ and Ma. Cruz Arriaga Ruiz¹*. ¹Departamento de Producción Agrícola, Centro Universitario de Ciencias Biológicas y Agropecuarias de la Universidad de Guadalajara. Km 15.5 Carretera Guadalajara Nogales, Las Agujas, Zapopan, Jalisco, México.
- P38. MOLECULAR AND CYTOLOGICAL ASPECTS OF TOMATO-RHIZOCTONIA SOLANI INTERACTION.** *Parissa Taheri and Saeed Tarighi.* Department of Crop Protection, Faculty of Agriculture, Ferdowsi University of Mashhad, P.O. Box 91775-1163, Mashhad, Iran
- P39. HOT WATER DIPS AND MODIFIED ATMOSPHERE PACKAGING AFFECT POSTHARVEST DECAY IN CHERRY TOMATOES.** *Salvatore D'Aquino¹, Mario Schirra¹, Francesco Mura², Virgilio Balmas³, and Amedeo Palma¹*¹CNR – Institute of the Science of Food Production- Traversa La Crucca, 3, Loc. Baldinca, Li Punti, 07100 Sassari, Italy. ²Agenzia LAORE Sardegna SUT Alghero Via XX Settembre, 7 07041 Alghero, Sassari, Italy. ³Dipartimento di Protezione delle Piante, Università di Sassari, Sassari, Italy.
- P40. PROPOSAL OF A TOOL TO ASSESS VULNERABILITY TO PEST RISK IN ORDER TO ENABLE BETTER RISK GOVERNANCE.** *Déus Isabelle¹, Wybo Jean-Luc¹ and Paré-Chamontin Ainhoa²*. ¹ARMINES – MINES

- P41. SUSTAINABLE CONTROL OF *BOTRYTIS CINEREA* IN HEATED TOMATO GREENHOUSES.** *Beyers Tom*,^{1,2,3} *Aerts Rudi*,¹ *Heyens Kathleen*,¹ *Seels Bjorn*,¹ *Vogels Liesbeth*,¹ *Mathys Janick*,² *Höfte Monica*³ and *Cammue Bruno*² ¹Research Group Sustainable Crop Protection, Katholieke Hogeschool Kempen, Kleinhoefstraat 4, 2440 Geel, Belgium, ²Centre of Microbial and Plant Genetics, Katholieke Universiteit Leuven, Kasteelpark Arenberg 20, 3001 Leuven, Belgium, ³ Laboratory of Phytopathology, Universiteit Gent, Coupure Links 653, 9000 Ghent, Belgium.
- P42. AGROCHEMICAL USE OF α -TOMATINE AND CRUDE EXTRACTS OF *SOLANUM SPP.* TO CONTROL PHYTOPATHOGENIC FUNGI.** *Massimo Zaccardelli*¹, *Francesco Campanile*¹, *Maria Cammareri*² and *Silvana Grandillo*² ¹CRA-Centro di Ricerca per l'Orticultura, Azienda agraria e laboratori di Battipaglia. SS 18 n. 204, 84091, Battipaglia (SA), Italy. ²CNR-IGV, Research Division Portici, via Università, 133, 80055 Portici (NA), Italy. (ZACC 2).
- P43. CONTROL OF CORKY ROOT OF TOMATO WITH COMPOST AND ROLE OF SPORE-FORMING BACTERIA TO INHIBIT *PHYRENOCHAETA LYCOPERSICI*** *Massimo Zaccardelli*¹, *Catello Pane*, *Domenico Perrone*¹, *Nicoletta Pucci*², *Alessandro Infantino*² ¹C.R.A.- Centro di Ricerca per l'Orticultura, Azienda agraria e laboratori di Battipaglia. SS 18 n° 204, 84091, Battipaglia (SA), Italy.²CRA-Centro di Ricerca per la Patologia Vegetale, Via C. G. Bertero, 22, Rome, Italy. (ZAC 1).
- P44. A NEW SPORE PRECIPITATOR WITH POLARIZED DIELECTRIC INSULATORS FOR PHYSICAL CONTROL OF TOMATO POWDERY MILDEW.** *Hideyoshi Toyoda*¹, *Teruo Nonomura*¹, *Junji Kimbara*² and *Yoshinori Matsuda*¹. ¹Laboratory of Plant Protection and Biotechnology, Department of Agricultural Science and Technology, Kinki University, Nara 631-8505, Japan, ²Research Institute, Kagome Company, Tochigi 329-2762, Japan.
- P45. PLANT BIOMOLECULES AS POSSIBLE TOOLS AGAINST TOMATO PHYTOBACTERIAL INFECTIONS.** *Fabio Mastrogiovanni*¹, *Elisa Ovidi*¹, *Alessio Quattrucci*², *Giorgio Mariano Balestra*², *Antonio Tiezzi*¹ ¹Laboratorio di Citologia e Biotecnologie Vegetali, Dipartimento Scienza Ambientali, Università della Tuscia, Viterbo.²Dipartimento di Protezione delle Piante, Università degli Studi della Tuscia, Via S. Camillo de Lellis, 01100 Viterbo, Italy.
- P46. PROTECTION OF NURSERY STAGE TOMATO SEEDLINGS FROM RHIZOSPHERE PATHOGENS *Ralstonia solanacearum* AND *Fusarium oxysporum* f. sp. *radicis-lycopersici*.** *Teruo Nonomura*¹, *Yoshinori Matsuda*¹, *Junji Kimbara*² and *Hideyoshi Toyoda*¹ ¹Laboratory of Plant Protection and Biotechnology, Department of Agricultural Science and Technology, Kinki University, Nara 631-8505, Japan, ²Research Institute, Kagome Company, Tochigi 329-2762, Japan
- P47. FIELD EVALUATION OF THE PLANT GROWTH PROMOTING, *PSEUDOMONAS* SP. B25 STRAIN IN CONTROLLING *TOBACCO MOSAIC VIRUS* AND EARLY BLIGHT DISEASE IN TOMATO.** *M.S. Kulkarni*¹, *V.B. Naragund*², *K.S. Jagadeesh*³ and *P.U. Krishnaraj*⁴ ¹Dept. of Plant Pathology, KRCCH, Arabhavi, ²Dept. of

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- P48. USE OF ESSENTIAL OILS AND GLUCOSYNOLATES TO CONTROL INSECTS AND VIRAL DAMAGES ON TOMATO CULTIVATED IN OPEN FIELD.** *Massimo Zaccardelli, Francesco Campanile, Mario Parisi, Domenico Rongai*¹C.R.A.- Centro di Ricerca per l'Orticultura, Azienda agraria e laboratori di Battipaglia. SS 18 n° 204, 84091, Battipaglia (SA), Italy. (ZAC. 5).
- P49. REACTION OF TOMATO ROOTSTOCKS TO SELECTED SOIL-BORNE PATHOGENS UNDER ARTIFICIAL INOCULATION CONDITIONS.** *Giovanna Gilardi, Pingxiang Lu, Maria Lodovica Gullino, and Angelo Garibaldi.* Center of Competence for the Innovation in the Agro-Environmental Sector (AGROINNOVA), University of Torino, Via Leonardo da Vinci, 44, 10095 Grugliasco (TO), Italy (Gilardi 1)
- P50. MANAGEMENT OF POWDERY MILDEW IN SOILLESS TOMATOES BY USING POTASSIUM SILICATO.** *Giovanna Gilardi, Maria Lodovica Gullino, and Angelo Garibaldi.* Center of Competence for the Innovation in the Agro-Environmental Sector (AGROINNOVA), University of Torino, Via Leonardo da Vinci, 44, 10095 Grugliasco (TO), Italy (GILARDI 2).
- P51. EPIDEMIOLOGY AND MANAGEMENT OF SYRINGAE LEAF SPOT INCITED BY *PSEUDOMONAS SYRINGAE* PV. *SYRINGAE* ON TOMATO.***Giovanna Gilardi, Maria Lodovica Gullino, and Angelo Garibaldi.* Center of Competence for the Innovation in the Agro-Environmental Sector (AGROINNOVA), University of Torino, Via Leonardo da Vinci, 44, 10095 Grugliasco (TO), Italy. (GILARDI 3).
- P52. UV-REFLECTIVE MULCH AND CHEMICAL RESISTANCE INDUCTION FOR THE CONTROL OF TOMATO YELLOW LEAF CURL DISEASE IN GREENHOUSE TOMATO CROPS.** *Antonella Sirigu*¹, *Mauro Nannini*¹, *Santino Meloni*¹ and *Aniello Crescenzi*²¹ *Agris Sardegna - DIRVE, V.le Trieste 111, 09123 Cagliari, Italy;* ² *Università degli Studi della Basilicata - Dipartimento di Biologia, Difesa e Biotechnologie Agro-Forestali, Potenza, Italy.*
- P53. IN VITRO BIOCONTROL OF TOMATO FUSARIUM WILT USING SOME SOIL BACTERIA.** *Mladen Djordjevic, Jelena Damnjanovic, Milan Ugrinovic, Radisa Djordjevic, Jasmina Zdravkovic and Bogoljub Zecevic* Institute for Vegetable Crops, Karadjordjeva 71, 11420 Smederevska Palanka, Serbia.
- P54. BIOCONTROL OF TOMATO BACTERIAL SPECK BY NATURAL EXTRACTS.** *Alessio Quattrucci*¹ *Giorgio Mariano Balestra*¹ *Dipartimento di Protezione delle Piante, Università degli Studi della Tuscia, Via S. Camillo de Lellis, 01100 Viterbo, Italy.*
- P55. BIOCONTROL OF SOIL BORNE FUNGI IN TOMATO CROP BY USING BENEFICIAL *BACILLUS SUBTILIS* STRAINS.** *Florica Constantinescu*¹, *Ana Tomescu*², *Tatiana Eugenia Şesan*³, *Patricia Maria Ştirbu*⁴ *Research Institute for Plant Protection, B-dul Ion Ionescu de la Brad 8, Bucharest, Romania;* ²*Biotech Foundation, Str. Semicercului 4, Bucharest, Romania;* ³*University of Bucharest, Faculty of Biology, Botany & Microbiology Department, Aleea Portocalelor 1-3, Bucharest, Romania;* ⁴*Dow AgroSciences, France*

- P56. CONTROL OF VIRAL DAMAGES ON TOMATO IN OPEN FIELD, BY TREATMENTS WITH A PGPR STRAIN OF *PSEUDOMONAS PUTIDA*.** *Massimo Zaccardelli, Francesco Campanile, Armida Del Galdo and Domenico Perrone. CRA-Centro di Ricerca per l' Orticoltura, Azienda agraria e laboratori di Battipaglia. SS 18 n. 204, 84091, Battipaglia (SA), Italy. (ZAC. 6).*
- P57. FIELD EVALUATION OF A NEW FUNGICIDE MIXTURE AGAINST *Phytophthora infestans* (Mont.) de Bary ON TOMATO.** *Stepanović Miloš, Rekanović Emil, Todorović Biljana, Potočnik Ivana, and Milijašević-Marčić Svetlana Institute of Pesticides and Environmental Protection, Laboratory of Applied Phytopathology, Belgrade, Serbia.*
- P58. EVALUATION OF THE EFFICACY OF ADMINISTRATION OF SYSTEMIC INSECTICIDES BY RADICAL IN CONTAINING VIRAL INFECTIONS (CMV AND PVY) TRANSMITTED BY APHID VECTORS IN TOMATO.** *¹Fanigliulo Angela, ¹ Massa Carmine Giuseppe, ^{1, 2}Pacella Rosa and ²Crescenzi Aniello. ¹Bioagritest Test Facility, Bioagritest Srl - Centro Interregionale di Diagnosi Vegetale. Zona PIP lotto E2. 85010 Pignola (PZ, Italy); e-mail: info@bioagritest.it; www.bioagritest.it. ²Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali – Università degli Studi della Basilicata. Viale dell'Ateneo Lucano Campus Macchia Romana 3A310, 85100 Potenza (PZ) Italy. e-mail: aniello.crescenzi@unibas.it*
- P59. APPLICATION OF PHYTOSANITARY CERTIFICATION TO TOMATO PRODUCTION IN ITALY.** *¹Fanigliulo Angela, ¹ Comes Soccora and ¹ Viggiano Antonella. ¹Bioagritest Test Facility, Bioagritest Srl - Centro Interregionale di Diagnosi Vegetale. Zona PIP lotto E2. 85010 Pignola (PZ, Italy); e-mail: info@bioagritest.it; www.bioagritest.it. ²Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali – Università degli Studi della Basilicata. Viale dell'Ateneo Lucano Campus Macchia Romana 3A310, 85100 Potenza (PZ) Italy. e-mail: aniello.crescenzi@unibas.it*
- P60. POST HARVEST PATHOGENS, PRE AND POST HARVEST FACTORS CONTRIBUTING TO DETERIORATION OF TOMATOES ON THE MARKETS: THE CASE OF GWERU.** *¹Muziri. T., ¹Magwiro. Z., ²Manjeru, P., I. ¹Pahla, and T. ²Madanzi. ¹Department of Horticulture, Midlands State University, P. Bag 9055, Gweru, ²Department of Agronomy, Midlands State University, P. Bag 9055, Gweru*