

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome GIUSEPPA
Cognome CRESCIMANNO
E-mail giuseppa.crescimanno@unipa.it
gcrescim@gmail.com

FORMAZIONE TITOLI

o Full professor of Agricultural and Technical Hydrology- Agricultural Faculty, Palermo University, Italy. November 2002 -present.

o Head, Section for Science, UNESCO-BRESCE (October 1st, 2007-September 30,2008)

o (<http://portal.unesco.org/en/ev.phpURLID=39745&URLD0=DOTOPIC&URLSECTION=201.html>);

o Visiting professor, California University, Riverside, February -April 2006:

o Associate Professor of Agro-Hydrology, Agricultural Faculty, Palermo University (1992-2002);

o Researcher (Agricultural Faculty, Palermo University) (1983-1992).

Degree in Agricultural Sciences (maximum cum laude). Palermo University, July 1980.

Phylosophy Doctor, Ph.D in *Production Ecology and Resources Conservation*. Wageningen University, The Netherlands, 17 September 2001.

<http://library.wur.nl/WebQuery/wda/lang/1627483>

ATTIVITA' DIDATTICA

Corsi tenuti attualmente:

Idrologia agraria e tecnica (Laurea triennale Agro-ingegneria)

Idrologia e Irrigazione (LM PTA)

Course of ***Agricultural and Technical Hydrology*** (Corso di laurea Agroingegneria- Faculty of Agriculture, Palermo)- 2005- present

Course of **On-farm irrigation systems** (Italian-Egyptian international degree course "Organic Farming and quality management")-2010-present

Course of ***Agro-hydrology*** (Corso di laurea in Scienze e tecnologie agrarie). 1992-2005

Course of ***Erosion and soil conservation*** (Forestry Faculty, Palermo) 1995-1997

Course of **Hydraulics and Hydrology** (Università della Calabria, 1990-1991).

Agricultural Hydraulics (practical applications) (17/11/83- 7/9/92).

RICERCHE FINANZIATE

UNESCO Working Group on "Building Capacity in Biotechnology for Research and application in a Changing Environment in SEE Countries" (2007-2008);

European Soil Thematic Strategy for soil protection Task 5: *Links with organic matter and contamination working group and secondary soil threats*". (Erosion Working Group). 2002-2005 (<http://www.igme.es/internet/recursosminerales/nacionales-referencia/pdf/erosion/WP.5.Enclosures5250504.pdf>)(<http://ec.europa.eu/environment/soil/index.htm>).

European Project: *"An integrated approach for sustainable management of irrigated lands susceptible to degradation/desertification"*. Environment and Climate Programme, Area 1.1.43: "Land resources, and the threat of land degradation and desertification in Europe" (contracts ENV4-CT97-0681 and ERBIC20-CT98-0113). 1998-2001.

Bilateral cooperative project "Shrinkage in clay soils and possible influence of salinity/sodicity. with the Staring Centre, Wageningen (NL)-Funded by CNR. 1995-1996

Bilateral cooperative project: "Use of the Geonics EM-38 for mapping salinization at different scales" Instituto Mexicano de l' Agua (Cuernavaca, Mexico). 2004-2006

Bilateral agreement with Arizona State University (USA): " Sustainable management of irrigation with saline water in arid countries". 2006-present.

INCARICHI / CONSULENZE

- Independent expert/evaluator appointed by the European Union, Programmes "Energy, Environment and Sustainable Development", and "Sustainable management and quality of water". 1998-present (contracts n. ENV5-CT1999-90006; EVK1-CT1999-90343; call n. FP6-2004-FOOD-3-B, CT-EX2002B043108-101), call FP6-2005-Global 4);

- Independent expert/evaluator appointed by Israel Science Foundation (Evaluation of the Application N. 819/04-13.0)

Member of the FAO Roster of experts in management of salt-affected soil. 2007- present

- Reviewer for international Journals: Soil Science Society of America, Agricultural Water Management, Australian Journal of Agricultural Research, Geoderma, Soil and Sediment Contamination, Journal of Hydrology (1995-present);

PUBBLICAZIONE

- Publications (2005-2013)
- Crescimanno, G., and P. Garofalo. 2005. Application and evaluation of the SWAP model for simulating water and solute transport in a cracking clay soil. *Soil Sci. Soc. Am. J.* 69:1943-1954.
- Crescimanno G. and P. Garofalo. 2006. Scenari di gestione dell'irrigazione con acque saline in un vigneto irriguo siciliano. *Rivista di Ingegneria Agraria* (2006), 1: 35-44
- Crescimanno G. and P. Garofalo. 2006. Water and solute transport in the unsaturated zone and management of irrigation in cracking soils. Poster, EGS General Assembly, *Vienna (AUSTRIA), 02-07 April 2006*
- Crescimanno G. and P. Garofalo. 2006. Management scenarios optimizing irrigation with saline water in cracking clay soils. *Soil Sci. Soc. Am. J.* 2006 70:1774-1787; doi:10.2136/sssaj2005.0335
- Crescimanno G. and P. Garofalo. 2006. Response to "Comments on 'Application and Evaluation of the SWAP Model for Simulating Water and Solute Transport in a Cracking Clay Soil'". *Soil Sci Soc Am J* 70:1817-1818 (2006)
- Crescimanno G. and P. Garofalo. 2006a. Management scenarios preventing salinization under irrigation with saline water.

Procs. International Workshop on Environmental Consequences of Irrigation with Poor Quality Waters. Kuala Lumpur, Malaysia, 11- 15 September 2006
- Crescimanno, G., De Santis A. 2006. Metodologie per lo studio dei processi di bypass flow in terreni argillosi sottoposto a differenti metodi irrigui. *Rivista di Ingegneria Agraria*, vol.3 (pp. 47-56), 2006
- Crescimanno G. and P. Garofalo. 2006b. Salinization, land degradation and management of irrigation in arid and semi-arid countries. *Plenary Conference*. Procs. of the X National and II International Soil Science Congress, Soil: food security and poverty. Agrarian University La Molina, Lima, Peru, November 6-10, 2006.
- Crescimanno G. and P. Garofalo. 2007. Irrigation strategies for optimal use of saline water in Mediterranean agriculture. International Conference on "Water Saving in Mediterranean Agriculture and Future Research needs". CIHEM, Bari, 14-17 February 2007
- Crescimanno G., G Provenzano and A. De Santis. 2007. Soil structure and bypass flow processes in a Vertisol under sprinkler and drip irrigation. *Geoderma*, 138 (2007), 110-138

Crescimanno G. 2007. Irrigation, salinization and desertification in Sicily. Key-note paper. In: Irrigation, salinization and desertification. Evolution of Cropping Systems as Affected by Climate

Change. (CLIMESCO) (Crescimanno and Marcum (eds). ISBN 978-88-548), 2009. Aracne, in press

Crescimanno G. Marcum K.B., Morga F. and C. Reina. 2007. Assessing and monitoring the risk of salinization by the Geonics EM-38: Application in a Sicilian irrigated area. *Global Network on Salinization prevention and productive use of Salt-affected habitats (SPUSH) And The Expert consultation on Advances in Assessment and Monitoring of Salinization for Managing Salt-affected habitats*. Dubai, United Arab Emirates, 26-29 November 2007.

Crescimanno G., 2008. Institutes and Centres under the auspices of UNESCO. Proceedings of the Workshop organized by Forgea International, Edited by Forgea, Cagliari, November 2008.

Crescimanno G. 2008. Women and Science 2008- Italy and the international context. Published with the cooperation of UNESCO Office in Venice, Regional Bureau for Science and Culture in Europe (BRESCE), Studio Pirovano Consulting S.r.l. and the FaiR association, Observa.

Crescimanno G. 2008. Linking Climate change to Soil protection for developing effective mitigation strategies and policy options. Key-note paper. In: Needs and Priorities for Research and Education in Biotechnology applied to emerging Environmental Challenges in SEE Countries. (Crescimanno et al. (eds). ISBN 978-86-912323-1-3. <http://unesdoc.unesco.org/images/0018/001831/183173E.pdf>

Crescimanno G., Orlović S., Santesso R. and L.P. Pajnik. 2008. Needs and Priorities for Research and Education in Biotechnology applied to emerging Environmental Challenges in SEE Countries. G. Crescimanno et al (eds). ISBN 978-86-912323-1-3. <http://unesdoc.unesco.org/images/0018/001831/183173E.pdf>

Castrignanò A., Crescimanno G., Fiorentino C., Provenzano G., Sollitto G. and D. Ventrella. 2008. An approach to assess soil salinisation in a catchment of south-western Sicily (Italy). Proceedings of the 5th International Conference on Land Degradation, Valenzano, Bari, 18-22 September 2008. Edited by Pandi Zdruli and E. Costantini, 2008. ISBN 2-85352-399-3.

Crescimanno G., Marcum, K. B., Morga F. and C. Reina. 2009. Monitoring soil salinization as a strategy for preventing land degradation. Proceedings of the 5th International Conference on Land Degradation, Valenzano, Bari, 18-22 September 2008. Edited by Pandi Zdruli and E. Costantini, 2008. ISBN 2-85352-399-3.

Crescimanno G. and K.B. Marcum, K. B., 2009. Irrigation, salinization and desertification. Evolution of Cropping Systems as Affected by Climate Change. (CLIMESCO). ISBN 978- 88-548), 2009. Aracne.

Crescimanno, G. 2009. Irrigation, salinization and desertification in Sicily. In Crescimanno G. and K.B. Marcum, K. B., 2009. Irrigation, salinization and desertification. Evolution of Cropping Systems as Affected by Climate Change. (CLIMESCO). ISBN 978-88-548), 2009. Aracne.

Vita E. and G. Crescimanno. Sustainable management of water as a strategy for preventing conflicts and enhancing unity in mediterranean countries affected by water scarcity and climate change. Procs. of the 1st EMUNI Research Souk 2009 (EMUNI ReS 2009)- The Euro-Mediterranean Student Research Multi-conference.- Unity and Diversity of Euro-Mediterranean Identities- 9 June

2009.

Baiamonte G., Crescimanno G., Marcum K. B., Reina C. and A. Versaci. 2009. Plant and soil responses to deficit and saline irrigation under field irrigated conditions in a Sicilian vineyard. *Procs of the Int. Conference on Farming Systems Design 2009*, Monterey (Ca), August 23-26, 2009.

Crescimanno G., Marcum, K. B., Reina C. and A. Versaci. 2009. Investigating soil-plant relationships for sustainable management of irrigation with saline water in a Sicilian vineyard. *WIT Transactions on Ecology and the Environment*, Vol 125, pp. 525-535, 2009. ISBN: 978-1-84564-199-3. 2009 WIT Press. www.witpress.com, ISSN 1743-3541 (on-line).

Crescimanno G., Marcum, K. B and F. Morga. 2010. Plant response to irrigation with saline water in a sicilian vineyard: results of a 3-years field investigation. *International Conference on Soil Classification and Reclamation of Degraded Lands in Arid Environments and Launching of Abu Dhabi Soil Survey Report*. 17-19 May, 2010. Abu Dhabi, United Arab Emirates

Sollitto D, , Castrignanò A., Crescimanno G., Provenzano G., and D. Ventrella. 2010. Soil salinisation assessment by multivariate geostatistics in a coastal basin of south-western Sicily (south Italy). *4th International Workshop on Digital Soil Mapping*. Rome, 24-26 May 2010

Crescimanno G., Marcum, K. B., Morga F. and C. Reina. 2010. Monitoring soil salinization as a strategy for preventing land degradation: a case study in Sicily. In: *Land Degradation and Desertification: Assessment, Mitigation and Remediation* (Zdruli, Pagliai, Kapur and Faz Cano (eds). Springer-Verlag Berlin Heidelberg New York. ISBN 2-85352-399-3

Giuseppina Crescimanno, Kenneth B. Marcum· Francesco Morga· **2012. Plant response to irrigation with saline water in a Sicilian vineyard: results of a three-year field investigation.** *Italian Journal of Agronomy* 2012; doi:10.4081/ija.2012.e11

Giuseppina Crescimanno, Francesco Morga, Domenico Ventrella 2012. [Application of the swap model to predict impact of climate change on soil water balance in a Sicilian vineyard](#). *Italian Journal of Agronomy* 2012; DOI: [10.4081/ija.2012.e17](#)

Donato Sollitto, Daniela De Benedetto, Annamaria Castrignanò, Giuseppina Crescimanno, Giuseppe Provenzano, Domenico Ventrella. 2012.

[Spatial data fusion and analysis for soil characterization: a case study in a coastal basin of south-western Sicily \(southern Italy\)](#)

Italian Journal of Agronomy 2012; DOI: [10.4081/ija.2012.e4](#)

Giuseppina Crescimanno and Kenneth B. Marcum. 2013. **Plant Response to Saline-Water Irrigation in a Sicilian Vineyard.** Chapter 29. in S.A. Shahid et al. (eds.), *Developments in Soil Salinity Assessment and Reclamation: Innovative Thinking and Use of Marginal Soil and Water Resources in Irrigated Agriculture*, DOI 10.1007/978-94-007-5684-729, © Springer Science +Business Media Dordrecht 2013

Structure alteration of a sandy-clay soil by biochar amendements
Giorgio Baiamonte, Claudio De Pasquale, Valentina Marsala, Giulia Cimò, Giuseppe Alonzo, Giuseppina Crescimanno & Pellegrino Conte. 2014. Structure alteration of a sandy-clay soil by biochar amendment. *J Soils Sediments*, DOI 10.1007/s11368-014-0960-y

PUBLICATIONS (2000-2004)

- Crescimanno G. Provenzano G. La gestione dell'irrigazione con acque salino/sodiche in terreni suscettibili a processi di degradazione. Irrigazione e Drenaggio, anno XLVII- n. 1 , gennaio marzo 2000, pagg. 21-24
- Crescimanno G. and G. Provenzano.2000. Hydrological processes affecting land degradation in the Mediterranean environment. Third International Congress of the European Society for Soil Conservation (ESSC). Valencia, Spain, 28 March- 1 April 2000.
- Crescimanno G., De Santis A., P. Garofalo. Gestione dell'irrigazione con acque salino/sodiche: problematiche e considerazioni. Palermo, Giugno 2000
- Crescimanno, G. 2001. An integrated approach for sustainable management of irrigated lands susceptible to degradation/desertification. Final report ENV7-CT97-0681. April.
- Crescimanno, G. 2001. La gestione dell'irrigazione nel quadro del miglioramento della qualità e della riduzione dei costi di produzione in viticoltura. Final Report POP 94/99 Project, Misura 10.4, Ricerca applicata: 1998-2001.
- Bootink H.W,G., Crescimanno G., Provenzano G. and J. Bouma. 2001. Measurement and Simulation of Bypass flow in Structured Clay soils. Procs. of the 2nd International Symposium on Preferential Flow: Water movement and chemical transport in the environment. Hawaii. January 3-5.
- Crescimanno, G. 2001. Irrigation practices affecting land degradation in Sicily. PhD Dissertation Thesis, Wageningen University, The Netherlands. ISBN 9058084264
- Crescimanno G., Provenzano G. and H.W.G. Bootink. 2002.The effect of alternating different water qualities on accumulation and leaching of solutes in a Mediterranean cracking soil. Hydrological Processes , Vol. 16 Issue 3, pages 717-730.
- Crescimanno G., De Santis A. 2002. Trasporto preferenziale di acqua e soluti in un terreno argilloso: indagine sperimentale. Rivista di Ingegneria agraria. n.3:41-48-2002.
- Crescimanno G. Il rischio desertificazione e l'irrigazione. Agricoltura moderna, Anno XXII, n. ¾ (maggio-agosto 2003)
- Crescimanno G., Garofalo P. 2004.Validazione e calibrazione del modello SWAP attraverso il confronto con misure di contenuto idrico del terreno. Rivista di Ingegneria Agraria, 2004, 2, 87-96
- Crescimanno G., De Santis A. Bypass flow, salinization and sodication in a cracking clay soil. Geoderma. 2004, 121, 307-321

- Crescimanno G., M. Lane, P.N. Owens, B. Rydell, O.H. Jacobsen, O. Düwel, H. Holger Böken, J. Berényi-Üveges, V. Castillo and A. Imeson. 2004. *Taskgroup 5. Link with Organic matter and contamination working group and secondary soil threats*. Reports of the technical working groups established under the thematic strategy for soil protection. Volume 2 Erosion. Edited by Lieve Van-Camp, Benilde Bujarrabal, Anna Rita Gentile, Robert J A Jones, Luca Montanarella, Claudia Olazabal, Senthil-Kumar Selvaradjou (2004) EUR 21319 EN/2. <http://ec.europa.eu/environment/soil/pdf/vol2.pdf>
- Castillo V., A. Arnoldussen, S. Bautista, P. Bazzoffi, G. Crescimanno, A. Imeson, R. Barman, M. Robert, J. L. Rubio. 2004. *Taskgroup 6. Desertification*. Volume 2 Erosion. Edited by Lieve Van-Camp, Benilde Bujarrabal, Anna Rita Gentile, Robert J A Jones, Luca Montanarella, Claudia Olazabal, Senthil-Kumar Selvaradjou (2004). EUR 21319 EN/2. <http://ec.europa.eu/environment/soil/pdf/vol2.pdf>
- Vandekerckhove L., A. Arnoldussen, P. Bazzoffi, H. Böken, V. Castillo, G. Crescimanno, O. Düwell, J. Fons Esteve, A. Imeson, R. Barman, R. Jones, J. Kozba, M. Lane, Y. Le Bissonnais, G. Loj, P. N. Owens, L. Øygarden, K. Mollenhauer, V. Prasuhn, P. Redfern, J. Sánchez Díaz, P. Strass, J. Üveges Berényi. 2004. *Taskgroup 7. Monitoring Soil Erosion in Europe*. Volume 2 Erosion. Edited by Lieve Van-Camp, Benilde Bujarrabal, Anna Rita Gentile, Robert J A Jones, Luca Montanarella, Claudia Olazabal, Senthil-Kumar Selvaradjou (2004) EUR 21319 EN/2. <http://ec.europa.eu/environment/soil/pdf/vol2.pdf>
- Crescimanno G., and A. De Santis. 2005. Processi di salinizzazione e sodicizzazione in terreni argillosi con crepacciature in condizioni di bypass flow. *Rivista di Ingegneria Agraria*. n.1:7-15, 2005.

PUBLICATIONS (1982-1999)

- Crescimanno G. Osservazioni sul metodo del drenaggio del campione per la determinazione della diffusività idrica del terreno agrario. *Atti dell'Accademia di Scienze, Lettere ed Arti di Palermo*, Gennaio 1982
- Crescimanno G., Giordano G. Osservazioni particolari sulle resistenze in alcuni processi di moto dell'acqua nei mezzi insaturi. *Congresso di Idraulica*, Bologna 1982
- Crescimanno G., Giordano G., Musacchia F. Approfondimenti teorici ed applicativi sulla determinazione della diffusività idrica del terreno col metodo *outflow one-step*. *Atti della 1a sezione AIGR del Congresso nazionale di Padova*, 1982
- Crescimanno G., Giordano G. Determining hydrological characteristics of the soil for an irrigation reducing drainage needs. *XII International Congress on Irrigation and Drainage, ICID, Fort Collins, USA*, Maggio 1984
- Crescimanno F.G., Di Lorenzo R, Occorso G., Sottile I, Crescimanno G., Giordano G. Osservazioni sullo stress idrico in alcune combinazioni di innesto della vite in Sicilia. *Accademia Italiana della Vite e del Vino*, Catania, 1985
- Crescimanno G., Di Lorenzo R, Occorso G., Sottile I. Osservazioni preliminari sull'andamento dei potenziali idrici nel sistema terreno-pianta-bassa atmosfera in viti allevate a contropalliera ed a tendone. *Convegno di studi su Bilancio e prospettive dell'irrigazione in*

Sicilia. Catania, Ottobre 1986

- **Bagarello V. Crescimanno G. Confronto tra due noti modelli di stesura del bilancio idrologico: risultati e osservazioni. Accademia di Scienze, Lettere ed arti di Palermo, Aprile 1987.**
- **Crescimanno G., Giordano G.. Analysis of applicability of Van Genuchten and Brooks-Corey water content-pressure head equations. XIX General Assembly of IAHS, Vancouver, August 1987**
- **Crescimanno G., Giordano G. Un criterio di valutazione dell'idoneità dell'acqua all'irrigazione. Atti del IV Convegno Nazionale "Ingegneria per lo sviluppo dell'agricoltura", Porto Conte, Alghero, Maggio 1988**
- **Crescimanno G., Ferro V., Giordano G. Evaluating the "characteristic" discharge based on the equilibrium slope of mountainous streams. Atti dell' International Workshop on Hydrology of mountainous areas, Czechoslovakia, June 1988. Pubbl. IAHS n.190**
- **Crescimanno G., Giordano G. Effetti dell'utilizzazione di acque salino-sodiche sulle caratteristiche idrologiche del terreno. XXI Convegno di Idraulica e Costruzioni Idrauliche, L'Aquila, Settembre 1988**
- **Crescimanno G., Di Lorenzo R, Occorso G., Sottile I. Ulteriori osservazioni sullo stress idrico in combinazioni di innesto della vite in Sicilia. III Congresso sui portinnesti della vite, Potenza, Novembre 1988**
- **Crescimanno G., Giordano G. Evaluating the quality of reservoir irrigation water in the Sicilian environment. Third Scientific Assembly of I.A.H.S, Baltimore (Maryland), May 1989**
- **Crescimanno G., Ferro V., Giordano G. Alcune considerazioni sulla portata dominante nei torrenti montani. Rivista di Ingegneria agraria, Anno XX, N.2, Giugno 1989**
- **Crescimanno G., Giordano G. A criterion for evaluating quality of irrigation water. 11th International Congress on Agricultural Engineering, Dublin, 4-8 September 1989**
- **Agnese C, Crescimanno G., Giordano G. Un modello di bilancio idrico del sistema terreno-pianta-bassa atmosfera. Rivista "Irrigazione e drenaggio", Anno XXXVI, n.4, Ottobre-dicembre 1989**
- **Crescimanno G., Di Lorenzo R, Occorso G., Sottile I. Ulteriori considerazioni sull'andamento dei potenziali idrici nel sistema terreno-pianta-bassa atmosfera in viti allevate a controspalliera ed al tendone. Rivista VigneVini, Anno XII, N.9, Bologna 1989**
- **Bagarello V., Crescimanno G. Indagini preliminari sull'applicabilità di una formula per la stima dell'evapotraspirazione di riferimento, basata su dati termometrici. XXII Convegno di Idraulica e Costruzioni idrauliche, Cosenza, 4-7 Ottobre 1990**
- **Bagarello V., Crescimanno G. Considerazioni sui modelli statistici per la stima dell'interrimento dei serbatoi artificiali in Italia. Presentata al Convegno Nazionale "I piani di bacino per la difesa del suolo, la gestione delle acque e la tutela dell'ambiente. Taormina,**

Novembre 1990.

- **Crescimanno G. Fattori di scala nell'idrologia del terreno. Seminari itineranti del GRU.SI. Udine, Giugno 1989**
- **Crescimanno G. La variabilità spaziale nella caratterizzazione idraulica di un'area. Associazione Italiana Genio Rurale- I sezione: Seminario su "Caratterizzazione idraulica dei suoli". Portici, 30-31 Maggio 1990.**
- **Crescimanno G. Generalità sul terreno agrario sotto l'aspetto fisico. Seminari itineranti del GRU.SI. Alghero, 26-29 Giugno 1990.**
- **Crescimanno G., Iovino M. Valutazione degli effetti della composizione chimica delle acque sulle caratteristiche idrologiche del terreno. Convegno AIGR, Maratea, Giugno 1993**
- **Crescimanno G., Iovino M., Giordano G., Provenzano G. Assessing the impact of irrigation with saline-sodic waters on the structural and hydrological characteristics of soil. Proc. International Conference on Problems and Management of Soil Salinization-Alkalinization in Europe", Budapest, 26-30 April 1994**
- **Agnese C., Crescimanno G., D'asaro F. A drought analysis in South-Western Sicily based on daily rainfall series. Tucson, Arizona, Ottobre 1994**
- **Crescimanno G. and M. Iovino. Evaluating the effects of using saline-sodic solutions on the hydraulic characteristics of soil. Proc. of the International Symposium on Water Quality Modeling, Orlando, Florida, 2-5 Aprile 1995.**
- **Crescimanno G., Iovino M. Parameter estimation by inverse method based on one-step and multi-step outflow experiments. Geoderma 68, 257-277, 1995**
- **Crescimanno G., Iovino M., Provenzano G. Influence of salinity and sodicity on soil structural and hydraulic characteristics. Soil Sci. Soc. Am. J., 59, n.6, 1701-1708, 1995. <http://soil.scijournals.org/cgi/content/abstract/59/6/1701>**
- **Crescimanno G., Provenzano G. Fenomeni di rigonfiamento e contrazione dei terreni argillosi: indagine sperimentale nell'ambiente siciliano. Rivista di Ingegneria agraria, Anno XXVII, n.3, Settembre 1995**
- **Crescimanno G., Iovino M., Marcone E. Irrigation with saline-sodic waters: water and salt-balance in a Sicilian field. Procs. of the International Symposium on Salt-affected Lagoons Ecosystems, Valencia, 18-25 Settembre 1995**
- **Crescimanno, G. Irrigation with saline/sodic waters in Mediterranean regions: soil quality degradation and desertification. International Conference on Mediterranean Desertification, Crete, Oct 29-Nov.1. 1996**
- **Baiamonte G., Crescimanno G. Assessing the influence of salinity and sodicity on wet-aggregate stability and water dispersible clay to prevent soil crusting and erodibility. Int. Conf. on "Water management, salinity and pollution control towards sustainable irrigation in**

Mediterranean regions. MAIBARI, 22-26 Sett. 1997

- **Crescimanno G. Provenzano G. Shrinkage of clay soil under irrigation with saline/sodic waters: cracking and bypass flow. Int. Symp. of Salt-affected soils in the arid ecosystem. Cairo, 22-28 sett. 1997**
- **Crescimanno, G. Irrigation with saline/sodic waters in Mediterranean regions: soil quality degradation and desertification in Southern Italy. FAO Global Network on Integrated management for Sustainable Use of Salt affected Soils. Cairo, 21-26 Sett. 1997**
- **Crescimanno G. Problematiche inerenti ai processi di trasporto di acqua e soluti in terreni con macropori. Seminari del GRUSI, Roma, 13 Gennaio 1998**
- **Crescimanno G. Provenzano G. Clay soils susceptible to bypass flow: influence of sodicity on water balance. XIIIth Int. Congress on Agricultural Engineering, Rabat, Marocco, 2-6 febbraio 1998**
- **Crescimanno, G. An integrated approach for for sustainable management of irrigated land susceptible to degradation/desertification. European Climate science Conference. Vienna, City Hall, 19-23 October 1998-11-26**
- **Crescimanno G. Provenzano G. Soil shrinkage characteristic in clay soils: measurement and prediction. . Soil Sci. Soc. Am. J., Jan-Febr. 63: 25-32, 1999**
- **Baiamonte G., Crescimanno G. Determinazione della stabilità della struttura con il metodo del setacciamento in acqua. Rivista di Ingegneria Agraria, Anno XXX, Numero 2: pp. 95-102, Giugno 1999**
- **Crescimanno, G. An integrated approach for sustainable management of irrigated lands susceptible to degradation/desertification. Technical Report 1st year: ENV7-CT97-0681 and ERBIC20-CT98-0113. March 1999.**
- **Crescimanno G., Provenzano G. and H.W.G. Booltink. Bypass flow of water and solutes in Mediterranean swelling and shrinking soils. XXIV General Assembly of EGS, Den Haag, April 19-23, 1999.**
- **Crescimanno G. and G. Baiamonte. Hydraulic characterization of swelling/ shrinking soils by a combination of laboratory and optimization techniques. In Modelling of transport processes in soils (J. Feyen and K. Wiyo eds.). Wageningen Pers, Wageningen (NL), 1999. ISBN 90-74134-76-9**

International Research Fellowship:

- **Visiting professor**, California University, Riverside, February 2006-April 2006; Topic: "Sustainable management of irrigation with saline waters: application and evaluation of simulation models predicting salinization and sodication". Fellowship funded by OECD-Food, Agriculture and Fisheries co-operative research programme, Biological Resource Management for Sustainable Agricultural Systems.

Invited speaker international symposia

FAO Global Network on Integrated management for Sustainable Use of Salt affected Soils. Cairo, 21-26 Sept. 1997:

- Sponsor: F.A.O.
- Symposium paper: "Irrigation with saline/sodic waters in Mediterranean regions: soil quality degradation and desertification in Southern Italy";
- **X National and II International Soil Science Congress, Soil: food security and poverty**. Agrarian University La Molina, Lima, Peru, November 6-10, 2006.
 - Symposium paper: Salinization, land degradation and management of irrigation in arid and semi-arid countries;
- **FAO Global Network on Salinization Prevention and Productive Use of Salt-affected Habitats (SPUSH)**. Dubai, United Arab Emirates, November, 2007 .
 - Sponsor: F.A.O.
 - Symposium paper: Assessing and monitoring the risk of salinization by the Geonics EM-38: Application in a Sicilian irrigated area.

Coordinating international projects, networks, and or mobility programmes:

- **UNESCO** Working Group on "Building Capacity in Biotechnology for Research and application in a Changing Environment in SEE Countries" (2007-2008);
- **UNESCO** Basic and Engineering Programme (Regular programme, BRESCE, 2007-2008);
- **European** Soil Thematic Strategy for soil protection (<http://ec.europa.eu/environment/soil/index.htm>). Task 5: *Links with organic matter and contamination working group and secondary soil threats*". (Erosion Working Group). 2002-2005 (<http://www.igme.es/internet/recursosminerales/nacionales-referencia/pdf/erosion/WP.5.Enclosures5250504.pdf>)
- **European Project**: "An integrated approach for sustainable management of irrigated lands susceptible to degradation/desertification". Environment and Climate Programme, Area 1.1.43: "Land resources, and the threat of land degradation and desertification in Europe" (contracts ENV4-CT97-0681 and ERBIC20-CT98-0113). 1998-2001.
- Bilateral cooperative project "Shrinkage in clay soils and possible influence of salinity/sodicity. with the Staring Centre, Wageningen (NL)-Funded by CNR. 1995-1996
- Bilateral cooperative project: "Use of the Geonics EM-38 for mapping salinization at different scales" Instituto Mexicano de l'Agua (Cuernavaca, Mexico). 2004-2006
- Bilateral agreement with Arizona State University (USA): "Sustainable management of irrigation with saline water in arid countries". 2006-present.
- Socrates/Erasmus mobility Programme. 1990-present

Participating to international networks and working groups:

- President of ActionAid-Gruppo Locale di Palermo (January 2010-present);
- UNESCO Inter-sectoral Platform on Climate change (2007-2008);
- FAO Global Network on Salinization Prevention and Productive use of Salt-affected Habitats (SPUSH) (<http://www.fao.org/ag/AGL/agll/spush/>); 1997-present;
- European Soil Thematic Strategy for soil protection: Task 7: "Monitoring soil erosion in Europe". (Erosion Working Group-2002-2005) (<http://ec.europa.eu/environment/soil/index.htm>)
- **European** Soil Thematic Strategy for soil protection. Task 6: "**Desertification**". (2002-2005) (<http://ec.europa.eu/environment/soil/index.htm>);

Coordinating national projects and/or working groups:

- Progetto POP 94/99, Misura 10.4, Ricerca applicata: "La gestione dell'irrigazione nel quadro del miglioramento della qualità e della riduzione dei costi di produzione in viticoltura" (1998-2001)
- Impiego delle acque salmastre a fini irrigui" (PRIN 1998-2000)
- Conseguenze dell'irrigazione con acque salino/sodiche sulle caratteristiche fisiche del sistema suolo-culture (PRIN 2000-2002).
- Strategie per l'utilizzazione di acque salino-sodiche in terreni argillosi con crepacciature (PRIN 2003-2005).
- Strategie e problematiche legate alla desalinizzazione di terreni argillosi con crepacciature (PRIN 2005-2007)
- Project FISR "Evoluzione dei sistemi culturali a seguito di cambiamenti climatici "**(CLIMESCO)**. Funded by Ministeri dell'Economia e delle Finanze, dell'Istruzione, Università e Ricerca, dell'Ambiente della Tutela del Territorio, delle Politiche Agricole e Forestali (2006-2010);

International Workshops and/or Sessions organized and convened:

- EGS and AGU Conference, Den Hague, 1999. Session on "**Hydrological and management problems in swelling/ shrinking soils** (HSA6: Hydrology and soil processes) Convener: Crescimanno, G; Co-Convener(s): Booltink, H. Tuesday, 20 April 1999-Lecture Room: Karel Appel Zaal;
- Workshop on "**Irrigation, Salinization and Desertification**" (Palermo, January 16, 2007)
- EGS session on "**Water science: source of conflict or cooperation?**" , organized and co-convened as Head of Science at UNESCO-BRESCE, in cooperation with the *UNESCO-IHE Institute for Water Education* (Vienna, 15-18 April 2008)
- UNESCO Workshop on: "**Needs and Priorities for Research and Education in Biotechnology applied to emerging Environmental Challenges in SEE Countries**" (Workshop organized and convened as Head of Science at UNESCO-BRESCE (Novi Sad, Serbia, July 8-10, 2008) (<http://unesdoc.unesco.org/images/0018/001831/183173E.pdf>)

AMBITI DI RICERCA

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report item is not
reachable.

Education and training:

- o **Degree** in Agricultural Sciences (maximum cum laude). Palermo University. July 1980.
- o **Phylosophy Doctor, Ph.D** in ***Production Ecology and Resources Conservation***. Wageningen University, NL, 17 September 2001. Ph.D Thesis: "Irrigation practices affecting land degradation in Sicily" (<http://library.wur.nl/WebQuery/wda/lang/1627483>)

Experience:

- o **Head, Section for Hydraulics and Irrigation** (Sezione Idraulica) , Dipartimento di Ingegneria e tecnologie agro-forestali, Università di Palermo. 2010-2013
- o **Full professor of Agricultural and Technical Hydrology-** (Idrologia agraria e tecnica) Dipartimento di Scienze Agrarie e Forestali (SAF), Palermo University, Italy. November 2002 -present.
- o **Head, Section for Science, UNESCO-BRESCE** (October 1st, 2007-September 30,2008)
- o (<http://portal.unesco.org/en/ev.phpURLID=39745&URLDO=DOTOPIC&URLSECTION=201.html>);
- o **Associate Professor of Agro-Hydrology** (Idrologia agraria)-, Agricultural Faculty, Palermo University (1992-2002);
- o **Researcher** (Agricultural Faculty, Palermo University) (1983-1992).

Teaching responsibilities (1983-present):

- o Course of **Hydrology and Irrigation** (Idrologia e Irrigazione) (Dipartimento di Scienze Agrarie e Forestali (SAF), Palermo University), 2012- Present
- o Course of **Agricultural and Technical Hydrology** (Idrologia agraria e tecnica) (Dipartimento di Scienze Agrarie e Forestali (SAF), Palermo University), 2005- Present
- o Course of **On-farm irrigation systems** (Italian-Egypt joint course on "Organic Farming and quality management")-2010-2013
- o Course of **Agro-hydrology** (Idrologia agraria) (Corso di laurea in Scienze e tecnologie agrarie). 1992-2005
- o Member of the Ph.D School "Idronomia ambientale" (Palermo University)-present
- o Course of **Erosion and soil conservation** (Erosione e conservazione del suolo) (Forestry Faculty, Palermo) 1995-1997
- o Course of **Hydraulics and Hydrology** (Idraulica e Idrologia) (Università della Calabria, 1990-1991).
- o Lectures within the courses of **Mathematics, Agricultural Hydraulics and Irrigation** (Matematica, Idraulica agraria e Irrigazione) (from 17/11/83 to 7/9/92).
- o **Agricultural Hydraulics** (Idraulica agraria) (practical applications) (17/11/83-7/9/92).

International Research Fellowship:

- o **Visiting professor**, California University, Riverside- February -April 2006; OECD Food, Agriculture and Fisheries co-operative research programme-Biological Resource Management for Sustainable Agricultural Systems-Theme 2: Sustainability in practice, topic "Risk assessment and management related to agricultural practices. "Title: Sustainable management of irrigation with saline waters: application and evaluation of simulation models predicting salinization and sodication-Contract:JA00032756

Invited speaker international symposia:

- **FAO Global Network on Salinization Prevention and Productive Use of Salt-affected Habitats (SPUSH)**. Dubai, United Arab Emirates, November, 2007 .
 - Sponsor: F.A.O.
 - Symposium paper: Assessing and monitoring the risk of salinization by the Geonics EM-38: Application in a Sicilian irrigated area.
- **X National and II International Soil Science Congress, Soil: food security and poverty**. Agrarian University La Molina, Lima, Peru, November 6-10, 2006.

- o Symposium paper: Salinization, land degradation and management of irrigation in arid and semi-arid countries;

• **FAO Global Network** on Integrated management for Sustainable Use of Salt affected Soils. Cairo, 21-26 Sept. 1997;

- Sponsor: F.A.O.
- Symposium paper: "Irrigation with saline/sodic waters in Mediterranean regions: soil quality degradation and desertification in Southern Italy";

Coordinating international projects, networks, and or mobility programmes:

• **UNESCO** Working Group on "Building Capacity in Biotechnology for Research and application in a Changing Environment in SEE Countries" (2007-2008);

• **UNESCO** Basic and Engineering Programme (Regular programme, BRESCE, 2007-2008);

• Bilateral agreement with Arizona State University (USA): "Sustainable management of irrigation with saline water in arid countries". 2006-present;

• Bilateral cooperative project: "Use of the Geonics EM-38 for mapping salinization at different scales" Instituto Mexicano de l'Agua (Cuernavaca, Mexico). 2004-2006;

- **European** Soil Thematic Strategy for soil protection (<http://ec.europa.eu/environment/soil/index.htm>). Task 5: *Links with organic matter and contamination working group and secondary soil threats*. (Erosion Working Group). 2002-2005 (<http://www.igme.es/internet/recursosminerales/nacionales-referencia/pdf/erosion/WP.5.Enclosures5250504.pdf>);
- **European Project**: "An integrated approach for sustainable management of irrigated lands susceptible to degradation/desertification". Environment and Climate Programme, Area 1.1.43: "Land resources, and the threat of land degradation and desertification in Europe" (contracts ENV4-CT97-0681 and ERBIC20-CT98-0113). 1998-2001;

• Bilateral cooperative project "Shrinkage in clay soils and possible influence of salinity/sodicity. with the Staring Centre, Wageningen (NL)-Funded by CNR. 1995-1996;

• Socrates/Erasmus mobility Programme. 1990-present

Member of international networks and working groups:

- **EMUNI** expert for ENPI/2009/226-479 project (2008-2010);
 - UNESCO Inter-sectoral Platform on Climate change (2007-2008);
 - European Soil Thematic Strategy for soil protection: Task 7: "Monitoring soil erosion in Europe". (Erosion Working Group-2002-2005) (<http://ec.europa.eu/environment/soil/index.htm>);
 - **European** Soil Thematic Strategy for soil protection. Task 6: "**Desertification**". (2002-2005) (<http://ec.europa.eu/environment/soil/index.htm>);
 - FAO Global Network on Salinization Prevention and Productive use of Salt-affected Habitats (SPUSH) (<http://www.fao.org/ag/AGL/agll/spush/>); 1997-present;

Coordinating national projects and/or working groups:

- Project FISR “Evoluzione dei sistemi colturali a seguito di cambiamenti climatici “(**CLIMESCO**). Funded by Ministeri dell'Economia e delle Finanze, dell'Istruzione, Università e Ricerca, dell'Ambiente della Tutela del Territorio, delle Politiche Agricole e Forestali (2006-2010);
- Strategie e problematiche legate alla desalinizzazione di terreni argillosi con crepacciature (PRIN 2005-2007);
- Strategie per l'utilizzazione di acque salino-sodiche in terreni argillosi con crepacciature (PRIN 2003-2005);
- Conseguenze dell'irrigazione con acque salino/sodiche sulle caratteristiche fisiche del sistema suolo-coltura (PRIN 2000-2002);
- Progetto POP 94/99, Misura 10.4, Ricerca applicata: “La gestione dell'irrigazione nel quadro del miglioramento della qualità e della riduzione dei costi di produzione in viticoltura” (1998-2001);
- Impiego delle acque salmastre a fini irrigui” (PRIN 1998-2000)

Convenor/organizer of International Workshops and/or Sessions:

- EGS session on “**Water science: source of conflict or cooperation?**”, organized and co-convened as Head of Science at UNESCO-BRESCE, in cooperation with the *UNESCO-IHE Institute for Water Education* (Vienna, 15-18 April 2008);
- UNESCO Workshop on: “**Needs and Priorities for Research and Education in Biotechnology applied to emerging Environmental Challenges in SEE Countries**” (Workshop organized and convened as Head of Science at UNESCO-BRESCE (Novi Sad, Serbia, July 8-10, 2008) (<http://unesdoc.unesco.org/images/0018/001831/183173E.pdf>);
- Workshop on “ **Irrigation, Salinization and Desertification**” (Palermo, January 16, 2007)
- EGS and AGU Conference, Den Hague, 1999. Session on “**Hydrological and management problems in swelling/ shrinking soils** (HSA6: Hydrology and soil processes) Convener: Crescimanno, G; Co-Convener(s): Booltink, H. Tuesday, 20 April 1999-Lecture Room: Karel Appel Zaal;

Expert/Evaluator/Reviewer:

- **Reviewer** of Projects **Prin 2012 and/or Futuro in Ricerca 2013** (appointed by Ministero dell'Istruzione, dell'Università e della Ricerca (2012-2013);
- **Expert** for the National Working Group “**Strategia del suolo e nuova PAC** (Ministero delle Politiche agricole, alimentari e forestali-Ufficio POS3) for application of the Soil Thematic Strategy (2007- 2010);
- **Independent expert/evaluator** appointed by the European Union, Programmes “Energy, Environment and Sustainable Development”, and “Sustainable management and quality of water”. 1998-present (contracts n. ENV5-CT1999-90006; EVK1-CT1999-90343; call n. FP6-2004-FOOD-3-B, CT-EX2002B043108-101), call FP6-2005-Global 4);
- **Independent expert/evaluator** appointed by Israel Science Foundation (Evaluation of the Application N. 819/04-13.0) (2007);
- **Expert** for the FAO Roster in management of salt-affected soil. 2007- present
- **Evaluator** for the CORI Committee for **International relations** of the Palermo University (1998- 2006). Selection of International cooperative projects funded by Università di Palermo;
- **Reviewer for international Journals (peer-review)**: Soil Science Society of America, Agricultural Water

Management, Australian Journal of Agricultural Research, Geoderma, Soil and Sediment Contamination, Journal of Hydrology (1995-present);

RESEARCH Focus:

- o Climate change, impact and mitigation;
- o Sustainable management of water and soil aimed at enhancing food production (arid regions, marginal areas);
- o Sustainable use of non-conventional waters for agriculture;
- o Transport of water and solutes in the soil-plant-atmosphere system;
- o Salinization (measuring, mapping), land reclamation;
- o Management strategies preventing desertification and enhancing food production under water scarcity and saline stress;
- o Irrigation strategies under drought conditions;
- o Salinization, loss of organic matter, erosion, compaction, contamination, desertification;
- o Application of simulation models and decision support systems for integrated management of water resources at different scales;

Language skills.

Advanced knowledge of English, good knowledge of French, basic knowledge of Spanish

Computer skills:

Very good (data base, spreadsheet, text processing)