

Regional symposium on the scientific outcomes of the project

Adaptation to climate change in WANA marginal environments through sustainable crop and livestock diversification

Organizers:

International Center for
Biosaline Agriculture (ICBA),
United Arab Emirates

National Center for
Agricultural Research and
Extension (NCARE), Jordan

Funders:

International Fund for
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Kuwait

OPEC Fund for International
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(IDB), Saudi Arabia

Partners:

NARS of Egypt, Jordan, Oman,
Palestine, Syria, Tunisia and
Yemen

Conference Coordinator:

Dr. Abdullah J. Al-Dakheel
a.dakheel@biosaline.org.ae

Scientific Committee:

- Dr. Shoaib Ismail, ICBA
- Dr. Abdullah Dakheel, ICBA
- Dr. Nanduri K Rao, ICBA
- Dr. Hassan El Shaer, Egypt
- Dr. Mohamed Al Rifae, Jordan
- Dr. Manhal Al Zoubi, Syria
- Dr. Mohamed Hachicha, Tunisia

Date: December 21-23, 2015

Location: Amman, Jordan

Agenda

Monday, December 21, 2015

08:30-10:00 Registration

10:00-11:00 Opening Session

- **Dr. Fawzi Al Shayyab**, Director General, National Center for Agricultural Research and Extension (NCARE), Jordan
- **Dr. Ismahane Elouafi**, Director General, International Center for Biosaline Agriculture (ICBA), UAE
- **H.H. Al Sharifa Zeinn Al Sharaf bint Nasser**, Chairperson of the Board of Trustees, The Hashemite Fund for Development of Jordan Badia
- **H.E. Dr Akef Al-Zoubi**, Minister of Agriculture, Jordan
- Movie on the Project

11:00-11:30 Break

11:30-13:30 Plenary Session: Countries' Achievements

Chair: Dr. Ismahane Elouafi
Rapporteur: Dr. N.K. Rao

11:30-11:45 ICBA

11:45-11:55 Jordan

11:55-12:05 Egypt

12:05-12:15 Palestine

12:15-12:25 Syria

12:25-12:35 Tunisia

12:35-12:45 Yemen

12:45-13:15 Discussion

13:15-14:15 Lunch

14:15-17:00 Session 1: Crop production and management (I)

Chair: Dr. Abdullah Dakheel
Rapporteur: Eng. Khalil Jamjoum

14:15-14:30 Integrated management package to maximize productivity of sorghum under marginal soil and water resources of north Sinai governorate - Egypt, **Khafaga, H.S.**

14:30-14:45 Increasing salt tolerance of Egyptian fodder beet by using integrated management system under marginal conditions in El-Tina plain, north Sinai – Egypt, **Sharkawy S.F.**

14:45-15:00 Introduction of quinoa to Jordan: adaptation to saline water irrigation and cultivation season, **Al-Abdullah M.A., Al-Rifae, M.K., Abu-Obaid A.M and Rao N.K.**

- 15:00-15:15 Salt-tolerant triticale (*X triticosecale* WITT) cultivation in Jordan, **Massimi M., Al-Rifae M. K., Alrusheidat J., Al-Dakheel A. and Al-Ashgar Y.**
- 15:15-15:30 Break**
- 15:30-15:45 Forage production of three introduced quinoa varieties under central highlands conditions in Yemen, **Daws M., AL-Moallem A., AL-Swedi N., AL-Montaser S., Abdulhabib A. and Basha R.**
- 15:45-16:00 Assessment of the potential and adaptability of some Yemeni sorghum genetic resources for the production of fodder under different environmental stresses in the Yemeni highlands, **Al Khader H.A., Farea M., Al Aqil M.M., Almuaallem A., Dows M., and Al-Bakri S.**
- 16:00-16:15 Effect of climate change and land use on the spatial distribution of plant biodiversity in Wadi Shueib area - Jordan, **Alrawashdeh N.Q., Oran S.A. and Al-Bakri J.**
- 16:15-16:30 Wheat landraces performance under saline conditions, **Ismail F.M., Al- Abdullah M.A, Abu-Obaid A.M. and Rifae M.K.**
- 16:30-16:45 Intercropping systems of winter and summer forage crops among *Atriplex nummularia* L. under Sinai saline conditions, **Khafaga H.S., Khafaga A.S., Al-Dakheel A. and El Shaer H.M.**
- 16:45-17:00 Discussion**

Tuesday, December 22, 2015

08:30-09:45 Session 2: Crop production and management (II)

Chair: Dr. Manhal Al Zoubi

Rapporteur: Dr. Nabil Bani Hani

- 08:30-08:45 Yield response of fodder sorghum (*Sorghum bicolor* L.) to seed rate under non-conventional water conditions, **Massimi M., Al-Rifae M.K., Alrusheidat J., Al-Dakheel A., Al-Qawaleet K., Al-Adamat A., Abu Dalbooh O., and Al-Jawhari N.**
- 08:45-09:00 Impact of technology packages on barley forage yield in central highlands in Yemen, **AL-Mmuaallem A., Dows M.M., AL-Mashrgy M.H. and Al-Asbahi L.**
- 09:00-09:15 Evaluation of sunflower forage productivity under saline soil and water stresses, **Abu-Obaid A.M., Al-Dakheel A., Al-Abdullah M.A and Al-Rifae, M.K.**
- 09:15-09:30 Screening sweet corn varieties for salinity adaption and quality silage production, **Al-Quran, I**

09:30-09:45 Discussion

09:45-10:00 Break

10:00-13:00 Session 3: Socioeconomic and extension

Chair: Dr. Hassan El Shaer

Rapporteur: Dr. Hussein Khafaga

- 10:00-10:15 Extensional evaluation of the impact of project on adaptation to climate changes in the marginal environments in Sinai Peninsula, **Ghoneim M.G.**
- 10:15-10:30 Impact of integrated management package for salt-tolerant forage production on small farmers poverty: Egypt's case study, **Mansour S.F. and Abozaid D.E.**
- 10:30-10:45 Assessment of the social impact on the farming communities in Sinai Peninsula adopted the project on adaptation to climate change in marginal environments, **Tohamy H.M. and Diab H.M.**
- 10:45-11:00 Validating farmers' adoption for salt-tolerant crop seeds in Jordan, **Massimi M., Al-Rifae M.K., Alrusheidat J., Al-Dakheel A., Al-Qawaleet K. and Haddad S.**
- 11:00-11:15 Discussion**
- 11:15-11:30 Break**
- 11:30-11:45 Resource-use efficiency of millet production under salinity conditions in North Sinai governorate, Egypt, **Mansour S.F. and Abozaid D.E.**
- 11:45-12:00 Women's role in agriculture in marginal areas of Jordan, **Al-Jawhari N., Khresat F.**
- 12:00-12:15 Factors determining TWW use and economic impact on farmers income: Tunisian case study, **El Amami H. and Hachicha M.**

- 12:15-12:30 Assessment of stakeholders' perception on climate change adaptation: Experience from semi-arid tropics and highland of Yemen, **Aldalas M. and Almuaallem A.**
- 12:30-12:45 Farmers' Acceptance for TWW re-use in agriculture in five governorates in the West Bank, Palestine, **Abu -Alhajja I. and Ghanma I.**

12:45-13:00 Discussion

13:00-14:00 Lunch

14:00-15:30 Session 4: Use of TWW in agricultural production (I)

Chair: *Dr. N. K. Rao*
Rapporteur: *Ms. Nadera Al-Jawhari*

- 14:00-14:15 Effect of combined treated wastewater with different levels of biosolids on productivity of barley, corn and sesbania in Ramtha and Dair alla, **Bani Hani N., Jamjoum K., Al-Shyab F., Al-Rifaei, M.K. and Al-Dhakeel A.**
- 14:15-14:30 Influence of reclaimed wastewater on the production of volatile oil plants and its impact on soil environment, **Jamjoum K., Bashabsheh I. and Al-Shyab F.**
- 14:30-14:45 Experiment of artificial recharge by treated wastewater (TWW) in Oued Souhil - Nabeul: effect on soil and groundwater characteristics, **Sahraoui H., Mghirbi O., Khelil M.N. and Hachicha M.**
- 14:45-15:00 Valorization of treated wastewater (TWW) in high saline and hydromorphic soil by alternative plants, **Souguir D., Zweri M., Hanchi B. and Hachicha M.**
- 15:00-15:15 Assessment of the effect of irrigating with treated wastewater on the production of alfalfa and vetch under the Palestinian conditions, **Alhajhusein M. and Nofal I.**

15:15-15:30 Discussions

15:30-15:45 Break

15:45-17:15 Session 5: Use of TWW in agricultural production (II)

Chair: *Dr. Mohamed Wassif*
Rapporteur: *Dr. Ahmad AlMuaallem*

- 15:45-16:00 Effects on the groundwater and drainage water under irrigation by TWW in the Cebala area, **Dahmouni M. and Hachicha M.**
- 16:00-16:15 Effects of irrigation with treated grey water on the production of 10 accessions of pearl millet under the Palestinian conditions, **Nofal I. and Alhaj Hussein M.**
- 16:15-16:30 Effect of different irrigation methods using TWW on the distribution of traces elements on soil and corn crops, **Khaskoussy K. and Hachicha M.**
- 16:30-16:45 Assessment of four varieties of fodder barley crop under wastewater irrigation in Dhamar, Yemen, **Al-Mashreki M.H., Daus M.M., Alasbahi L.K., Algulaibi N.M., Alyafeae S.A., Noradeen N.M., Almualem A.A. and Al-Aqel M.M.**
- 16:45-17:00 Assessment of the occurrence of pathogens in wastewater samples and the level of contamination of groundwater, soil and irrigated crops, **Sabbahi S. and Trad M.**

17:00-17:15 Discussion

Wednesday, December 23, 2015

08:30-10:00 Session 6: Animal production, forage quality and feeding

Chair: *Dr. Mansour Al Aqil*
Rapporteur: *Dr. Sherine Mansour*

- 08:30-08:45 Effects of feeding salt-tolerant plants silage on biochemical changes of Barki ewes and their lambs during the first month post-partum, **Ibrahim N.H. and El-Hawy A.S.**
- 08:45-09:00 Impact of prolonged salinity load on blood aldosterone, Na, K and water consumption in male Shami goats, **Ashour G., Badawy M.T., Hafez Y.M. and El-Bassiony M.F.**
- 09:00-09:15 Effects of long-term feeding halophytic plants on some productive and reproductive performance of Barki sheep ewes under saline conditions of Egypt, **Shawket S.M., Khattab I.M., Ahmed M.H. and El Shaer H.M.**

- 09:15-09:30 Impact of usage protected fats on the skin and hair of Shami does fed on halophytes under desert conditions, **Abdou A.S., Hekal S.A., Badawy N.S., Ramadan W.A. and Abo Bakr S.**
- 09:30-09:45 Effect of feeding lambs with alfalfa grass cultivated on treated wastewater, **Ababneh H. and Alsherydeh M.**
- 09:45-10:00 **Discussion**
- 10:00-10:30 Break**
- 10:30-13:00 Session 7: Soil and irrigation management (I)**

Chair: Dr. Muhamed Al-Rifae
Rapporteur: Eng. Muhannad Massimi

- 10:30-10:45 Evaluation of irrigation methods using two management packages under salt-affected environment of El-Tina plain, north Sinai, Egypt, **Hiekal H.A.M., Sharkawy S.F.T., Khafaga H.S., Wassif M.M. and Al-Dakheel A.**
- 10:45-11:00 Response of sorghum and pearl millet forage crops to soil mulching and n-fertilizer under salinity conditions at south Sinai, Egypt, **Hassan Kh.H., Shehata M., Draz M., Al Dakheel A., El Shaer H.M., Abdou S., Hekal S.A., Badawy N.S., Ramadan W.A. and Abo Bakr S.**
- 11:00-11:15 Effect of irrigation with various qualities of saline water and different rates of fertilizers on barley yield (*var. ACSAD 176*) and sorghum (Izraa7) and on soil properties under drip irrigation in the lower Euphrates Basin, **Al-Henish T., Al-Asi T., Al-Terki K., Al-Hamoud M. and Arslan A.**
- 11:15-11:30 Effect of irrigation with various qualities of saline water and different rates of fertilizers on proso millet yield and sorghum (Izraa7) and on soil properties under bed irrigation in the lower Euphrates Basin, **Al-Zoubi M.M., Al-Asi T., Al-Terki K., Al-Hamoud M. and Arslan A.**
- 11:30-11:45 The effect of irrigation water quality on Sesbania production and soil salinity under the lower Euphrates Basin conditions, **Adle W., Karash W.A.A., Al-Rabie S., Hnesh T., Yousef R. and Arslan A.**
- 11:45-12:00 Characterization of salt marshes vegetation in southeastern Egypt using a worldview-1 satellite image, **Mohamed A.H. and El Shaer H.**
- 12:00-12:15 The effect of adding gypsum, zeolite and organic manure on two salt-affected alkaline soils and forage crop yields under the lower Euphrates basin conditions, **Arslan A., Khuder A. and Abdulrazak O.**
- 12:15-12:30 The effects of different levels of irrigation water salinity on sorghum yield and soil properties using long furrows and drip irrigation in the lower Euphrates Basin, **Al-Asi T., Alhamood M., Arslan A., Al-Kaisi A., Alsuhi F., Dandal F. and Al-Hilawi N.**
- 12:30-12:45 Effect of irrigation with saline water on microbiological activity of Rhizosphere and on certain root traits of forage crops in the Euphrates Lower Basin, **Nakishbandi M., Issa A. and Arslan A.**

12:45-13:00 Discussion

13:00-14:00 Lunch

14:00-15:00 Closing Remarks and Recommendations

Coordinated by the Symposium Scientific Committee Members