Curriculum Vitae

1.Personal Data:

a. **Name** : Atif Elsadig Idris.

b. **Date and Place of Birth** : 9/10/1959, Khartoum, Sudan.

c. Nationality : Sudanese.d. Religion : Muslim.

e. **Married** with two sons and three daughters.

2.Present Address:

Associate Professor, Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology, Shambat, Khartoum North, P.O. Box 71, Sudan.

E-mail : atifelsadig@gmail.com, atifelsadig@sustech.edu

Mobile : 00249912962970 / 00249121075576.

Fax : +249185311896.

3. Education:

- Secondary Period: (1975-1978): Al-khartoum Algadida High Secondary School, Khartoum, Sudan.
- Intermediate Period: (1972-1975): Khartoum South General Secondary School, Khartoum, Sudan.
- Elementary Period: (1966-1972): 1st year at Alezba Elementary School (Khartoum North), 2^{ed} year at Malkal Elementary School (Upper Nile State), 3rd + 4th years at Alfashir Elementary School (North Darfor State), 5th year at Abdelmonim Elementary School (Khartoum 2), 6th year at Juba Elementary School (Equatorial State), Sudan.

4. Qualifications:

- **Ph.D. 2006**, in Agriculture, Agronomy (Breeding), University of Khartoum, Faculty of Graduate Studies, Khartoum, Sudan.
- M.Sc. 2001, in Agriculture, Agronomy (Breeding) Grade V. Good, Omdurman Islamic university, Khartoum, Sudan.

■ **B.Sc. 1986** in Agriculture, Agronomy, Grade Good, University of Monoufeia, Shebin Elkom, Egypt.

5. Theses Titles:

- The Title of Ph.D. Thesis: Evaluation of some Lines of Forage Sorghum "Sorghum bicolor L. Moeneh" for Hybrid Production in Sudan.
- The Title of M.Sc. Thesis: Study of Variability in Seven Genotypes of Sunflower (*Helianthus annuus* L.).

6. Area of Interest:

Agronomy (Genetics and Crop Breeding).

7. Professional Experiences:

- 2012, Associate Professor, Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
- 2007, Assistant Professor, Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
- 2004- 2007 Lecturer (Part- Timer), Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
- 1999- 2003 Teaching Assistant (Part Timer), Department of Agronomy, Faculty of Agriculture, University of Khartoum.
- 2012, Oct, 20-24. Attending Advanced Theoretical Training Course in Molecular Biology held at College of Agricultural Studies, Sudan University of Science and Technology, Shambat, Khartoum North, Sudan.
- **2012**, Internal Examiner:
 - o For the M.Sc. Student: Hajir Khalafalla Karamalla, her Thesis title was: Variability Study in some Sunflower (*Helianthus annuus* L.) Genotypes. Dept. of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
 - o For the M.Sc. Student: Rashieda Abdalla Mohamed, her Thesis title was: (Evaluation of New Locally Developed Forage Sorghum, (Sorghum bicolor L. Moench) Hybrids. Dept. of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.

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2012, External examiner:

o For the Ph.D. Student: Ebtehaj Mohamed Mahmood, University of Dongola. The title of her Thesis was: Effect of Nitrogen Fertilizer,

Sowing Date and Sowing Methods on some Wheat (*Triticum aestivum* L.) Cultivars.

o For M.Sc. student ARC Abuassar ...2013

- **2011, Internal examiner For the M.Sc.** Student: Adam Abdelgadir Dow Elbit. The Title of his Thesis was: (Effect of Sowing Date on Yield and Yield Components of Maize (*Zea mays* L.). Dept. of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
- 2011, (4-25, Dec.): Attending Scientific Program Titled: (Training Program of Experimental Technologies in Molecular Biology), Yangzhou University, Yangzhou City, Jiangsu Province, P.R. China.
- 2011,(23 Oct. to 3 Nov.): Attending The Basic Training Program for Developing The Professional Performance of The University Staff, University Staff Performance Development Centre, Sudan University of Science and Technology, Khartoum, Sudan.
- 2011, July, 11-14th: Participation in Scientific Research Skills Training Course held at the Sudanese Turkish Continuous Training Centre (STTC), Sudan University of Science and Technology, Khartoum, Sudan.
- 2011: March, 17th: Attending Training Period in Course Contents Preparation held by the Administration of Curriculum Assessment and Quality Guarantee, Sudan University of Science and Technology, Khartoum, Sudan.
- 2011, March, 20-24: Participation in Power Point Presentation Skills Training Course held at the Sudanese Turkish Continuous Training Centre (STTC), Sudan University of Science and Technology, Khartoum, Sudan.
- 2010 (15 Nov. -15 Dec.): Attending The Advance Course in Agricultural Training Program at Yangzhou University, Yangzhou City, Jiangsu Province, P.R. China.
- 2010: Nov. 2-3. Attending Training Period in Courses Map, held by the Administration of Curriculum Assessment and Quality Guarantee, Sudan University of Science and Technology, Khartoum, Sudan.
- 2008: Feb. 6-15th: Attending the 2nd National Theoretical and Practical in Course of Molecular Genetic Techniques in Characterization of Plant Germplasm held at Commission for Biotechnology and Genetic Engineering, National Centre for Research, Khartoum, Sudan.
- **2001-2006: Ph.D**. Student at University of Khartoum, Department of Agronomy, Faculty of Agriculture, Shambat, Sudan.
- 1997-2001: M.Sc. Student, at Omdurman Islamic University (M.Sc. courses) and University of Khartoum, Faculty Agriculture, Department

Agronomy (Conducting the Experiment and writing the Thesis), Khartoum, Sudan.

- **1997:** Computer Training courses.
- 1988-1996: Working as a private teacher at Saudi Arabia Kingdom.

8. Teaching Experience:

a. Undergraduate:

Lecturing the following courses for undergraduate students:

Principles of Genetics, Cyto-genetics, Principles of Plant Breeding, Breeding Field Crops (Sorghum, Maize, Cotton, Wheat Sunflower, Millet, Rice...etc), Seed production (Practical), Forage Crops, Cereal (Grain) Crops, Fiber Crops, Research Methodology, Crop Physiology, Field Crops, Principles of Crops Production and super vision of more than 77 Graduation Projects for the B.Sc. Honor Graduates at the Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.

b. Postgraduate: Lecturing the course of Seminars for M.Sc. students.

9. Supervision of post-graduate Students:

a. Sudan University of Science and Technology and Technology:

- Nine Students Awarded The M.Sc. (Agronomy and Crop Breeding)
 Degree Under my Supervision as the following:
 - 1. **Mona Mohammed Mahmoud Barakat,** Awarded Her M.Sc. Degree at 2010 under the Title: Variability and Correlation Between Some Morphological Characters in Forage Sorghum(*Sorghum bicolor L. Moench*).
 - 2. Fadwa Bahar Eldeen Mosa, Awarded Her M.Sc. Degree at 2010 under the Title: Variability and Correlation Between Yield and Yield Components in Eleven Genotypes of Forage Sorghum (Sorghum bicolor L. Moench).
 - 3. **Felix Justin Jagob,** awarded his M.Sc. Degree at 2010 under the Title: Study of Variability in Some Rice Genotypes (*Oryza sativa* L.) Genotypes.
 - 4. **Samah Hosein Tarbal**, Awarded her M.Sc. Degree at 2010 under the Title: Evaluation of Yield and Quality Characters of Rhodes Grass (*Chloris gayana* L.) as Inter Cropping with Philipsara (*Vigna trilobata*).

- 5. **Ezdhar Haffzeen Hassan Ali,** Awarded Her M.Sc. Degree at 2011 under the Title: Evaluation of Yield and Quality Characters of Rhodes Grass (*Chloris gayana* L.) as Inter Cropping with Clitoria (*Clitoria ternate* L.).
- 6. **Musa Ishag Mohamed Subai**, Awarded His M.Sc. Degree at 2012 under the Title: Evaluation of Some Local and Exotic Pearl Millet (*Pennisetum glaucum* L.) Genotypes for Some Yield Components.
- 7. **Mohamed Mohi Eldeen,** Awarded his M.Sc. Degree at 2013 under the title: Effect of Frequency Cutting Intervals on Growth, Yield of Forage and Seeds and Quality of Three Alfalfa (*Medicago sativa* L.) Cultivars.
- 8. **Onwar Dang Ajak Nyikwaj,** Awarded his M.Sc. Degree at 2013 under the title: Effe Statistical Analysis ct of compost and Nitrogen fertilizers on some Growth Yield and Quality characters of two hybrids of sunflower (*Helianthus annuus* L.).
- 9. **Hussein Hassan Saad** Awarded his M.Sc. Degree at 2013 under the title: Study of Variability and Phenotypic Co relation and in some Chick pea ssssssss(*Cicer arientum*) genotypes.
- Six (M.Sc. and Ph.D.) Students Registered under my Supervision (by Research study) from 2011 as the following:
 - **1. Heba Basher Gomaa,** Registered under my Supervision as a M.Sc. Student(by Research) at 2011, Her Research Concerns with the effect of Seasonality and Bio Fertilizer on Yield and Growth Characters of Sunflower (*Helianthus annuus* L.), She finished field experiments, Statistical Analysis and about to finish Thesis writing.
 - **2. Safa Ahmed Alobied,** registered under my supervision as a M.Sc. Student (by Research) at 2011, Her research concerns with the effect of Seasonality and Bio Fertilizer on Yield and Growth Characters of Maize (*Zea mays* L.). She finished field experiments, Statistical Analysis and about to finish Thesis writing.
 - **3. Salma Fatch Elrahman,** Registered under my Co Supervision as a Ph.D. Student (by Research) at 2011, Her Research Concerns with the Study of Molecular Characterization and Genetic Variability in Rice (Oryza sativa L.) Genotypes. She was finished The First Season of The Field Experiments and about to finish The Second Season
 - **4. Lyla Mohamed Elsadig**, Registered under my Co Supervision as a Ph.D. Student (by Research) at 2012, Her research concerns with the Study of Molecular Characterization and The Effect of Drought on Yield and Yield Components in Millet (*Pennisetum glaucum* L.) Genotypes.

She finished the two field experiments and about to begin the Lab. Experiments.

- **5. Esmael Ibrahim Almansor,** Registered under my Supervision as a M.Sc. Student (by Research) at 2012, His Research Concerns with The Effect of Drought on Yield and Yield Components in Grain Sorghum (Sorghum bicolor L. Moench) Genotypes. He finished the two field experiments, Statistical Analysis and about to finish Thesis writing.
- **6. Faisal Adam Ahmed Waldaa,** Registered under my Co Supervision as a Ph.D. Student (by Research) at 2013, Her research concerns with the Study of Performance of Thirteen Hybrids of Sunflower under rainfed and irrigated environments for two successive years. He finished the first field experiments at two locations and began the statistical analysis.

b. Other Universities: Non.

10. Research Projects:

- 1. In Rice: This Project was Approved and Financed by Ministry of Higher Education and aims to Study. The Genetic Variability, Molecular Characterization and Quality Parameters in Rice.
- 2. In sunflower: Biofertilizer Utilization in Sunflower: This Project was Approved and Financed Sudan University of Science and Technology.

11. Administrative Experiences:

- 2012, Head of the Scientific Tour for 5th class of The Department of Agronomy Students, College of Agricultural Studies, Shambat, Sudan University of Science and Technology Visited North Kordofan State (Alobied), Sennar and Jazera States at Dec. 2012.
- 2012, Contribution in Signing Memorandum Between College of Agricultural Studies, Sudan University of Science and Technology and Ministry of Agriculture, Khartoum State, Sep. 2012.
- 2011, Head of the Sudanese University Staff Members (39 Staff members from 7 Sudanese Universities) visited Yangzhou University, Yangzhou City, Jiangsu Province, P.R. China in the period from 4 Dec. to 25 Dec. 2011 for Attending Training Program of Experimental Technologies in Molecular Biology and Data Statistical Analysis) at Yangzhou University, P.R. China.

- 2010, Head of the Sudanese University Staff Members (29 Staff members from 9 Sudanese Universities) visited Yangzhou University, Yangzhou City, Jiangsu Province, P.R. China in the period from 15 Nov. to 15 Dec. 2010 for Attending The Advance Course in Agriculture at Yangzhou University, P.R. China.
- 2008, Head of the Scientific Tour for the 5th class of The Department of Agronomy Students, College of Agricultural Studies, Shambat, Sudan University of Science and Technology Visited Blue Nile (Damazen and Dender), Sennar and Jazera States at 2008.
- 2008, Member and Organizer of Assessment and Development of Agronomy undergraduate Courses Committee, Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology.
- 2008, Member of Assessment and Reliance Committee at Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology, till Now.
- 2008, Head of the Committee Responsible for Welcoming the new Students at College of Agricultural Studies, Shambat, Sudan University of Science and Technology at 2008.

12. Memberships:

- Member of board directors of Almokbrab co-operative and agricultural Society, Sudan from 1995 to 1999.
- Member of Almokbrab Co-operative and Agricultural Society, Sudan, since 1978 Till Now.

13. Extra Curricular Activities:

- Member of Algoran Alkareem Karary Location, Khartoum State.
- Member of Edhosen First Mosque Committee. Gabal Olyaa Location, Khartoum State, since 1978.

14. Publications:

1. **Idris,A.E.** and Abuali,A.I. (2011). Genetic variability for vegetative and yield traits in maize (*Zea mays* L.) genotypes. International Research Journal of Agricultural Science and Soil Science. Vol. 1(10) pp. 408-411.

- 2. **Idris, A. E.,** Justin, F. J., Dagash, Y.M.I. and Abuali, A.I. (2012). Genetic Variability and Inter Relationship between Yield and Yield Components in Some Rice Genotypes. American Journal of Experimental Agriculture. 2(2): 233-239.
- 3. Abuali1, A.I., Abdelmulla, A.A. and **Idris, A.E.** (2012). Character Association and Path Analysis in Pearl Millet (*Pennisetum glaucum* L.). American Journal of Experimental Agriculture. 2 (3): 370-381.
- 4. **Idris A.E.,** Mohamed, K.A. and Mohammed, H.I. (2012). Using Regression Indices and Multiple Criteria Analysis for Study of Some Rice Genotypes under Interaction of Variable Environmental Conditions. American Journal of Experimental Agriculture. 2 (3): 407-425, 2012.
- 5. **Idris, A.E.,** H.khairy A. I. and Dagash, Y.M.I. (2012). Evaluation of Intercropping of Rhodes Grass with Alfalfa Under Irrigation at Shambat. Advances in Environmental Biology. 6(1): 100-102.
- 6. **Idris, A.E.** and Mohammed, H.I. (2012). Screening and Evaluation of Forage Sorghum Cultivars for Forage production Using Multicriterion Decision Analysis. Advances in Environmental Biology, 6(3): 1141-1151.
- 7. **Idris, A.I.** and Mohammed, H.I. (2012). Screening Maize (*Zea mays* L.) Genotypes by Genetic Variability of Vegetative and Yield Traits Using Compromise Programming Technique. British Biotechnology Journal. 2(2): 102-114.
- 8. Mohamed, K. A., **Idris, A. E.,** Mohammed H. I. and O.Adam. K. A. (2012). Ranking Rice (*Oryza sativa* L.) Genotypes Using Multi-Criteria Decision Making, Correlation and Path Coefficient Analysis,. British Biotechnology Journal, 2(4): 211-228.
- 9. **Idris, A.E.,** Hamza, N. B., Yagoub, S. O., Ibrahim, A.E. A. and Elamin, H. K.A.(2012). Maize (*Zea mays* L.) Genotypes Diversity Study by Utilization of Inter Simple Sequence Repeat (ISSR) Markers. Australian Journal of Basic and Applied Sciences, 6(10): 42-47.
- 10. Abuali, A.I., Abdelmulla, A.A., Khalafalla, M.M., **Idris, A.E.** and Osman, A.O. (2012). Combining Ability and Heterosis for Yield and Yield Components in Maize (*Zea mays* L.). Australian Journal of Basic and Applied Sciences, 6(10): 36-41.
- 11. Subi, M.I.M. and **Idris, A.E**.(2013). Genetic variability, Heritability and Genetic Advance in Pearl Millet. (*Penisetum glaucum* [L.]R. Br.) Genotypes. British Biotechnology Journal. 3(1): 54-65.

- 12. **Idris**, **A.E.** and K. A. Mohamed(2013). Estimation of Genetic Variability and Correlation for Grain Yield Components in Rice (*Oryza sativa* L.). Global Journal of Plant Eco-physiology.3(1):1-6.
- 13. Ibrahim, Y.M.; **Idris*,A.E.**; Marhoum,M.A.(2014). Effect of Nitrogen Fertilizer on Irrigated Forage Pearl Millet (*Pennisetum americanum* L.K. Shcum) Universal Journal of Agricultural Research 2(2): 56-60.
- 14. Mohamed, H. I.; Karrar A.B., Elramlwai, H. R.; Saeed A. B. and **Idris A. E.** (2012). Performance of soil moisture retention and conservation tillage techniques as indicated by sorghum (*Sorghum bicolor* L. Moench.) yield and yield components Global Journal of Plant Ecophysiology, 2(1): 31-43.
- 15. Idris, A. E. and Adam, M. M (2013). Effect of Cutting Intervals on Yield and Yield Components of Three Alfalfa (Medicago sativa L.) Genotypes. Advances in Environmental Biology, 7(14): 4677- 4681.
- 16. Abuali A. I. . Abdelmula, A. A. Khalafalla, M. M. Hamza, N. B. Abdalla, A. H. and Idris, A. E. (2014). Assessment of Yield Stability and Adaptability of Parental Inbred Lines and F1- Hybrids of Grain Maize (Zea mays L.) Using AMMI Analysis. British Biotechnology Journal. 4(4): 339-349.
- 17. Mohamed. H. A. H. Ali, E. D. M. Mohammed, H. I. and Idris, A. E. (2012). Improving the Properties of Saline and Sodic Soils through Integrated Management Practices. Global Journal of Plant Ecophysiology, 2(1): 44-53.
- Karrar, A. B. Mohamed, H. I. Elramlwai, H. R. Saeed, A. B. and Idris, A. E.(, 2012). Effect of Planting Geometry on Soil Moisture Content, Yield and Yield Component of Sorghum (Sorghum bicolor L. Moench). Global Journal of Plant Ecophysiology, 2(1): 23-30 ISSN 2074-0891.
- 19. Karrar, A. B. Mohamed, H. I. Elramlwai, H. R. Saeed, A. B. and Idris , A. E. (2012). Effects of some in-situ water harvesting techniques on soil moisture and sorghum (Sorghum bicolor (L.) Moench) production in Northern Gedaref State. Global Journal of Plant Ecophysiology. 2(1): 54-66.
- 20. Karrar, A. B. Mohamed, H. I. Elramlwai, H. R. and Idris , A. E.,*(2014). Rain Fed Sorghum (Sorghum bicolor L. Moench) Crop Growth Yield Forecasting Model. Universal Journal of Agricultural Research 2(5): 154-167.
- 21. Elmunsor, I. I. Idris, A. E. Hamza, N. B. and Abuali, A. I. (June 2014), Screening of Grain Sorghum Genotypes under Drought Stress

- Conditions Using some Stress Tolerance Indices. Advances in Environmental Biology, 8(10): 27-30.
- 22. Abuali1, A. I. Abdelmula, A. A. Khalafalla, M. M. Idris, A. E. Nada Babiker Hamza5 (2014). Assessment of genetic variability of inbred lines and their F₁- hybrids of grain maize (Zea mays L.) under drought stress Conditions. International Journal of Agronomy and Agricultural Research (IJAAR). Vol. 5, No. 2, p. 22-30.
- 23. Alhussein, M. B. Idris, A. E. Kehail, S. A. A. and Mohamed, H. A. (April 21, 2015). Relative Resistance of Some Maize (Zea mays L.) Genotypes Against Stem Borers (Chilo partellus and Sesamia cretica) In Central Sudan. Journal of Advances in Biology ISSN 2349 0837. Pages 1238-1243.
- 24. Idris, A. E. Elmunsor1, I. I. and Abuali, A. I. Genetic Variability of Grain Sorghum (Sorghum bicolour L. Monech) Genotypes under Drought Stress Conditions. (April 21, 2015). Journal of Advances in Biology ISSN 2349-0837. Pages 1244 1249.
- 25. Osman, K. A. Mustafa, A. M. Elsheikh, Y. M. A. and Idris, A. E. (2015). Influence of different sowing dates on growth and yield of direct seeded rice (Oryza sativa L.) in semi-arid zone (Sudan). International Journal of Agronomy and Agricultural Research. (IJAAR)ISSN:2223-7054(Print)2225-3610(Online). Vol. 6, No. 6, p. 38-48.
- 26. Idris, A. E. Ahmed, S. F. Dagash, Y. M. I. and Abdel-Rahman, N. A. (2015). Investigation of Physico-chemical, Physical Prosperities and Minerals Content in some Rice (Oryza stiva L.) Genotypes. Journal of Applied and Industrial Sciences, Pages 3 (1): 36-44, ISSN: 2328-4595 (PRINT), ISSN:2328-4609 (ONLINE)Research Article 36.
- 27. Hamza, N. B. Idris, A. E. Elmunsor, I. I. Ibrahim, A. I. A. and Abuali, A. I. Drought Tolerance Assessment in Grain Sorghum. (Sorghum bicolor [L.] Moench) Genotypes Using. Agro morphological Traits and DNA Markers. (2016). International Journal of Plant Breeding and Genetics. ISSN 1819-3595. DOI: 10.3923. Pages 125.131
- 28. Obid1, S. A. Idris, A. E. Mohamed Ahmed, B. A. (2016). Effect of Bio-Fertilizer on Growth and Yield of Two Maize (Ze mays L.). Cultivars at Shambat, Sudan. Scholars Journal of Agriculture and Veterinary Sciences e-ISSN 2348–1854. Sch J Agric. 3(4):313-317 p-ISSN 2348–8883.
- 29. Basheer, H. G. Idris, A. E. Mohamed Ahmed, B. A. (2016). Impact of Bio-Fertilizer on Growth and Yield of Two Sunflower (Helianthus

- annuus L.) Hybrids at Shambat, Sudan. Scholars Journal of Agriculture and Veterinary Sciences e-ISSN 2348–1854. Sch J Agric, 3(4):332-336.
- 30. Elsadig. L. M. Idris2, A. E. Osman, A. A. M. and Abdel-Rahman, N. A.(2016). Investigation of Quality Traits In 30 Sudanese Pearl Millet (Pennisetum glaucum [L.]R. Br.) Genotypes. International Journal of Applied and Ture Science and Agriculture.ISSN Online-2394-5532. Page 62.
- 31. Elsadig, L. M. Idris, A. E. Osman, A. A. M. Abuali, A. I. and El Siddig, M. A. (2016) Genetic Diversity Among Sudanese Pearl Millet (Pennisetum glaucum L.) Genotypes Using Agro-morphological Traits and Molecular Markers (RAPD). International Journal of Applied and Ture Science and Agriculture. ISSN Online- 2394-5532. Page 51.

1. Seminars, Conferences & Symposia:

- 2014, Feb., Attending a workshop titled (Biotech......) held at Koral Hotel......Sudan
- 2014 Attending The International Conference Agriculture
- 2012 Attending The International Conference U of K. High Studies
- 2012, Dec., Attending a workshop titled (Outputs of Palm Dates Research at Sudan from 2004 to 2012) held at Sudan University of Science and Technology, College of Agricultural Studies, Shambat, Khartoym North Sudan.
- 2012, Nov. Attending a symposium titled (Genetics between Laboratory, Field Experiments and Application). Held by German Academic Exchange Service (DAAD) and DAAD Alumni Association Sudan (DAAS). November, 2012. Khartoum, Sudan.
- 2012, Attending a Workshop under different Titles concerns with Genetics Held by UNDP Sudan (TOKTEN) and Department of Botany, faculty of Science, University of Khartoum.22,Jan. to 1.Feb.,2012. Khartoum, Sudan.
- 2010, Feb., Attending The International Conference on Organic Farming, College of Agricultural Studies, Sudan University of Science and Technology, Held at Friendship Hall, Khartoum, Sudan, 4/2010.
- Attending different M.Sc. and Ph.D. Students Graduation Seminars at Shambat, College of Agricultural Studies, Sudan University of Science and Technology.

16. Referees (3 persons):

Prof. Dr. Yassin Mohamed Ibrahim Dagash, Department of Agronomy, College of Agricultural Studies, Sudan University of Science and Technology, Shambat, Khartoum North, Sudan.

Prof. Jadalla Abdalla Alhassan, Deputy Vice- Chancellor, Sudan University of Science and Technology, Sudan.

Dr. Abdelwahab Hassan Abdalla, Department of Agronomy, Faculty of Agriculture, University of Khartoum, Shambat, Khartoum North, Sudan.