

CHAPTER SIX

LITERATURE CITED

LITERATURE CITED

- Afiah, S.A.; Ahmed, K.Z.; Soliman, K. (2007).** Somaclonal variation in bread wheat (*Triticum aestivum* L.) RAPD, fingerprinting of elite genotypes under Siwa Oasis conditions. African Crop Science Conference Proceedings, 8: 2039-2045.
- Ahmad, M.S.A.; Javed F.; Ashraf M. (2007).** Iso-osmotic effect of NaCl and PEG on growth, cations and free proline accumulation in callus tissue of two indica rice (*Oryza sativa* L.) genotypes. Plant Growth Regulation, 53: 53–63.
- Akhtar, S.; Wahid, A.; Rasul, E. (2003).** Emergence, growth and nutrient composition of sugarcane sprouts under NaCl salinity. Biol Plant, 46: 113-117.
- Alcantara, G.B.; Dibax, R.; Oliveira, R.A., Filho, J.C.B.; Daros, E. (2014).** Plant regeneration and histological study of the somatic embryogenesis of sugarcane (*Saccharum spp.*) cultivars RB855156 and RB72454. Maringá, v.36 n.1 p. 63-72.
- Almazan, O.; Gonzalez, L.; Galvez, L. (1998).** The sugarcane, its by-products and co products. Annual Meeting of Agricultural Scientists, Réduit, Mauritius.<http://pmo.gov.mu/portal/sites/ncb/moa/farc/amas98/keynote.pdf>. Accessed 13 June 2010.
- Alvarez, I.; Tomaro, L.M.; Benavides, M.P. (2003).** Changes in polyamines, proline and ethylene in sunflower calluses treated with NaCl. Plant Cell Tissue Organ Cult, 74: 51–59.
- Ammirato, P.V. (1987).** In: Plant Tissue and Cell Culture, Plant Biology (eds. Green CE. *et al.*), Alan R. Liss, New York. Vol. 3. pp. 57-81.
- Anonymous, (2003).** Modern irrigation and fertigation methodologies for higher yields in sugarcane. <http://www.jains.com/PDF/crop/sugarcane%20cultivation.pdf>. Accessed 09 September 2010.
- Arencibia, A.D.; Carmona, R.; Cornide, M.T.; Menedez, E.; Molina, P. (2000).** Transgenic sugarcane (*Saccharum* Species). In Bajaj YPS (eds), Biotechnology in Agriculture and Forestry 46. Transgenic crops Springer Verlag, Heidelberg, 1: 188-206.

- Arruda, P. (2011)** Perspective of the sugarcane industry in Brazil. *Tropical Plant Biology*, 4: 3-8.
- Asad S.; Arshad, M.; Mansoor, M.; Zafar, Y. (2009).** Effect of various amino acids on shoot regeneration of sugarcane (*Saccharum officinarum* L.). *Afr. J. of Biotechnol.*, Vol. 8 (7): 1214-1218.
- Ashraf, M. (2010).** Inducing drought tolerance in plants: some recent advances. *Biotechnol. Adv.*, 28: 169-183.
- Ashraf, M.; Foolad, M.R. (2007).** Roles of glycine betaine and proline in improving plant abiotic stress resistance. *Environmental and Experimental Botany*, 59: 206–216.
- Badawy, O. M.; Nasr, M.I.; Alhendawi, R.A. (2008).** Response of sugarcane (*Saccharum* species hybrid) genotypes to embryogenic callus induction and *in vitro* salt stress. *Sugar Tech.*, (10) 3: 243-247.
- Bae, E.K.; Lee, H.; Lee, J.S.; Noh, E.W. (2010)** Isolation and characterization of osmotic stress-induced genes in poplar cells by suppression subtractive hybridization and cDNA microarray analysis. *Plant Physiology and Biochemistry*, 48: 136-141.
- Baird, V.; Abbott, A.; Ballard, R.; Sosinski, B. ; Rajapakse, S. (1997).** DNA Diagnostics in Horticulture, *Current Topics in Plant Molecular Biology Technology Transfer of Plant Biotechnology*. CRC Press, Boca Raton, 111–130.
- Baird, W.V.; Ballard, R.E.; Rajapakse, S.; Abbott, A.G. (1996).** Progress in *Prunus* mapping and application of molecular markers to germplasm improvement. *Hort Science*, 31:1099–1106.
- Balibrea, M.E.; Parra, M.; Bolarin, M.; Alfocea, F.P. (1999).** PEG-osmotic treatment in tomato seedlings induces salt-adaptation in adult plants. *Aust J Plant Physiol.*, 26: 781–786.
- Basnayake J., Jackson P.A., Inman-Bamber N.G., Lakshmanan P. (2012).** Sugarcane for water-limited environments. Genetic variation in cane yield and sugar content in response to water stress. *J. Exp. Bot.*, 63: 6023–6033.
- Basu, S.; Gangopadhyay, G.; Mukherjee, B.B. (2002).** Salt tolerance in rice *in vitro*: implication of accumulation of Na⁺, K⁺ and proline. *Plant Cell Tissue Organ Cult.*, 69:55–64.

- Bates, L.S.; Waldeen, R.P.; Teare, I.D. (1973).** Rapid determination of free proline for water stress studies. *Plant Soil*, 39: 205-207.
- Begum, M.K.; Islam, M.O.; Miah, M.A.S.; Hossain, M.A.; Islam, N. (2011).** Production of Somaclone *In vitro* for Drought Stress Tolerant Plantlet Selection in Sugarcane (*Saccharum officinarum* L.). *Agriculturists*, 9 (1&2): 18–28.
- Benlloch-González, M.; Fournier, J.M.; Ramos, J.; Benlloch, M. (2005).** Strategies underlying salt tolerance in halophytes are present in *Cynara cardunculus*. *Plant Sci.*, 168: 653–659.
- Blanco, M.A.; Nieves, N.; Sanchez, M.; Borroto, C.G.; Castillo, R., Gonzalez, J.L., et al. (1997).** Protein changes associated with plant regeneration in embryogenic calli of sugarcane (*Saccharum* sp.). *Plant Cell Tissue Organ Cult.*, 51: 153–158.
- Burner, M.D. (1992).** Regeneration and phenotypic variability of plants cultured *in vitro* from mature sugarcane caryopses. *J. Am. Soc. Sugar Cane Technol. (ASSCT), Florida and Louisiana Divisions*, 12: 82-90.
- Butterfield, M.K.; D'Hont, A.; Berding, N. (2001).** The sugarcane genome: A synthesis of current understanding and lessons for breeding and biotechnology .Proceedings of the SAn of Sugarcane. Technologists Association, 75: 1-5.
- Cano, E.A.; Perez-Alfocea, F.; Moreno, V.; Bolarin, M.C. (1996).** Responses to NaCl stress of cultivated and wild tomato species and their hybrids in callus cultures. *Plant Cell Rep.*, 15: 791–794.
- Chinnusamy, V.; Zhu, J.K. (2003).** Plant salt tolerance. *Top Curr Genet.*, 4: 241–270.
- Chuang, S.J.; Chen, C.L.; Chen, J.J.; Chou W.Y.; Sung J.M. (2009).** Detection of somaclonal variation in micro-propagated *Echinacea purpurea* using AFLP marker. *Scientia Horticulturae*, 120: 121-126.
- Cuesta, C.; Ordás, R.J.; Rodríguez, A.; Fernández, B. (2010).** PCR-based molecular markers for assessment of somaclonal variation in *Pinus pinea* clones micropropagated *in vitro*. *Biologia Planterum*, Vol. 54, (3): 435-442.
- D'Hont, A.; Sousa, G.M.; Menossi, M.; Vincentz, M.; Van Sluys, M.; Glaszmann, J.C.; Ulian, E. (2008).** Sugarcane: A major source of

- sweetness, alcohol, and bioenergy. In: Genomics of tropical crop plants. Moore, P.H., Ming R. (eds) Springer. Pp. 483-518.
- Duncan, K.P. (1955).** The pathology of rehabilitation. The Lancet. Vol. 265, (6863): 570.
- Dutta Gupta, S.; Auge, R.M.; Denchev, P.D.; Conger, B.V. (1995).** Growth, proline accumulation and water relations of NaCl- selected and non-selected callus lines of *Dactylis glomerata* L. Environ. Exp. Bot., 35: 83–92.
- Eagles, H.; Bariana, H.; Ogonnaya, F.; Rebetzke, G.; Hollamby, G.; Hentry, R.; Henschke, P.; Carter, M. (2001).** Implementation of markers in Australian wheat breeding. Aust. J. Agric. Res., 52: 1349-1356.
- Ehsanpour, A.A.; Fatahian, N. (2003).** Effects of salt and proline on *Medicago sativa* callus. Plant Cell Tissue Organ Cult., 73: 53–56.
- Ehsanpour, A.A.; Madani, S.; Hoseini, M. (2007).** Detection of somaclonal variation in potato callus induced by UV-C radiation using RAPD-PCR. General and Applied Plant Physiology, 23: 3-11.
- El-Sheikh, A.M.A. (2013).** Assessment of agronomic traits and sucrose content in polyploid plants of sugarcane (*Saccharum officinarum* L.). Ph.D. in Agricultural Sciences (Genetics). Faculty of Agriculture, Alexandria University.
- Errabii, T.; Gandonou, C. B.; Essalmani, H.; Abrini, J.; Idaomar, M.; Skali-Senhaji, N. (2006).** Growth, proline and ion accumulation in sugarcane callus cultures under drought-induced osmotic stress and its subsequent relief. Afr. J. Biotechnol., Vol. 5 (16): 1488-1493.
- Errabii, T.; Gandonou, C.B.; Essalmani, H.; Abrini, J.; Idaomar, M.; Senhaji, N.S. (2007).** Effects of NaCl and mannitol induced stress on sugarcane (*Saccharum sp.*) callus cultures. Acta physiol Plant, 29: 95-102.
- FAO (Food and Agriculture Organization of the United Nations) (2012).** FAO statistical database. <http://www.faostat.org.br>. Accessed 3 October 2012.
- Fischer, G.; Teixeira, E.; Hizsnyik, E.T.; Van Velthuisen, H. (2009).** Land use dynamics and sugarcane production. In: Sugarcane ethanol: Contributions to climate change mitigation and the environment.

Zuurbier, P., and Van de Vooren, J. (eds.) Wageningen Academic Publishers, the Netherlands. Pp 29-62.

- Gallo-Meagher, M.; Green, J. (2002).** Somatic embryogenesis and plant regeneration from immature embryos of saw palmetto, an important landscape and medicinal plant. *Plant Cell Tissue Organ*, 68: 253–256.
- Gandonou, C.B.; Errabii, T.; Abrini, J.; Idaomar, M.; Senhaji, N.S. (2006).** Selection of callus cultures of sugarcane (*Saccharum sp.*) tolerant to NaCl and their response to salt tolerance. *Plant Cell Tissue Organ Cult*, 87: 9–16.
- Gandonou, Ch. ; Errabii, T.; Abrini, J.; Idaomar, M.; Chibi, F. ; Senhaji, N. S. (2005).** Effect of genotype on callus induction and plant regeneration from leaf explants of sugarcane (*Saccharum sp.*). *Afr. J. Biotechnol.*, Vol. 4 (11): 1250-1255.
- Garcia, A.A.F.; Benchimo, L.L.; BarbosaI, A.M.M.; Geraldi, I.O.; Souza, C.L.; De Souza, A.P. (2004).** Comparison of RAPD, RFLP, AFLP and SSR markers for diversity studies in tropical maize inbred lines. *Genetics and Molecular Biology*, 27: 579-588.
- Garcia, A.B.; Engler, J.D.A.; Iyer, S.; Gerats, T.; Montagu, M.V.; Caplan, A.B. (1997).** Effects of osmoprotectants upon NaCl stress in rice. *Plant Physiol.*, 115: 159–169.
- Grivet, L.; Daniels, C.; Glaszmann, J.C.; D’Hont, A. (2004).** A review of recent molecular genetics evidence for sugarcane evolution and domestication. *Ethnobotany Research and Application*, 2: 9-17.
- Guiderdoni, E. (1986).** L’embryogenèse somatique des explants foliaires de canne à sucre (*Saccharum sp.*) cultivés *in vitro*. I- Initiation des cultures. *L’Agronomie Tropicale*, 41(1): 50-58.
- Gupta, P.; Varshney, R.; Sharma, P.; Ramesh, B. (1999).** Molecular markers and their applications in wheat breeding *Plant Breed*, 118: 369–390.
- Haq, I. ; Memon, S.; Gill, N. P.; Rajput, M. T. (2011).** Regeneration of plantlets under NaCl stress from NaN₃ treated sugarcane explants. *African Journal of Biotechnology*, Vol. 10 (72), pp. 16152-15156.
- Hasegawa, P.; Bressan, R.A.; Zhu, J.K.; Bohnert, H.J. (2000).** Plant cellular and molecular responses to high salinity. *Ann. Rev. Plant Physiol. Mol. Biol.*, 51: 463-499.

- Henry, R. (1997).** Molecular markers in plant improvement In: Practical applications of Plant Molecular Biology, 99–132, Chapman and Hall, London.
- Hoezel, A.R.; Green, A. (1998).** Molecular genetic analysis of populations: a practical approach. Oxford University Press, Oxford. Pp. 1-445.
- Jahufer, M.; Cooper, M.; Ayres, J.; Bray, R. (2002).** Identification of research to improve the efficiency of breeding strategies for white clover in Australia: A review, Aust J Agric Res, 53: 239–257.
- James, G. (2004).** Sugarcane. Blackwell Publishing, Oxford. Pp. 1-214.
- Jones, N.; Ougham, H. ; Thomas, H. (1997).** Markers and mapping: We are all geneticists now, New Phyto, 1137: 165–177.
- Joshi, S.; Ranjekar, P.; Gupta, V. (1999).** Molecular markers in plant genome analysis. Curr. Sci., 77: 230–240.
- Karpe, A.; Nikam, A. A.; Chimote, K. P.; Kalwade, S. B.; Kavar, P. G.; Babu, H.; Devarumath, R. M.; Suprasanna, P. (2012).** Differential responses to salinity stress of two varieties (CoC 671 and Co 86032) of sugarcane (*Saccharum Officinarum* L.). Afri J Biotechnol., 11 (37): 9028–9035.
- Kasha, K. J. (1999).** Biotechnology and world food supply, Genome, 42: 642–645.
- Keamer, K.; Esterhuizen, D. (2011).** Republic of SA: Sugar annual. Global Agricultural Information Network Report. <http://static.globaltrade.net/files/pdf/20110426152955482.pdf>. Accessed 18 August 2011.
- Kelly, J.D; Miklas, P.N. (1998).** The role of RAPD markers in breeding for disease resistance in common bean. Mol. Breed., 4: 1–11.
- Khan, I. A.; Bibi, S.; Yasmin, S.; Khatri, A.; Seema, N. (2013).** Phenotypic and genotypic diversity investigations in sugarcane for drought tolerance and sucrose content. Pak. J. Bot., 45 (2): 359-366.
- Koch, C. A.; Ramgareeb, S.; Rutherford, R. S.; Snyman, S. J.; Watt, M. P. (2012).** An *in vitro* mutagenesis protocol for the production of sugarcane tolerant to the herbicide imazapyr. *In Vitro Cell. Dev. Biol. Plant*, 48: 417–427.
- Koebner, R.M.D. ; Summers, R.W. (2003).** 21st century wheat breeding: Plot selection or plate detection, Trends Biotechno., 121: 59–63.

- Kunert, K.J.; Baaziz, M.; Cullis, C.A. (2003).** Techniques for determination of true-to-type date palm plants. Techniques for determination of true-to-type date palm (*Phoenix dactylifera*: A literature review. Emirates Journal of Agriculture Science, 15: 1-16.
- Lakshmanan, P.; Geijskes, R.J.; Aitken, K.S.; Grof, C.L.P.; Bonnett, G.D.; Smith, G.R. (2005).** Sugarcane biotechnology: The challenges and opportunities. *In Vitro Cellular and Developmental Biology Plant*, 41: 345-363.
- Lal, N. (2003).** High Frequency Plant Regeneration from Sugarcane Callus. Sugar Tech., vol.5 (1&2): 89-91
- Lata, C.; Prasad, M. (2011).** Role of DREBs in regulation of abiotic stress responses in plants. *J. Exp. Bot.*, 62: 4731–4748.
- Lee, M. (1995).** DNA Markers and Plant Breeding Programs, *Adv. Agron.*, 55: 265–344.
- Lerner, H.R. (1985).** Adaptation to salinity at the plant cell level. *Plant Soil*, 89: 3–14.
- Lingle, S.E.; Wiegand, C.L. (1996).** Growth and yield responses of sugarcane to saline soil: II. Sucrose biochemistry in individual internodes. *Proc. Inter American Sugarcane Seminars*, 93-102.
- Lutts, S.; Almansouri, M.; Kinet, J.M. (2004).** Salinity and water stress have contrasting effects on the relationship between growth and cell viability during and after stress exposure in durum wheat callus. *Plant Sci.*, 167: 9-18.
- Lutts, S.; Kinet, J.M.; Bouharmont, J. (1996).** Effects of salt stress on growth, mineral nutrition and proline accumulation in relation to osmotic adjustment in rice (*Oryza sativa* L.) cultivars differing in salinity resistance. *Plant Growth Regul.*, 19: 207–218.
- Mackill, D.J.; Nguyen, H.T.; Zhan, J. (1999).** Use of molecular markers in plant improvement programs for rain fed lowland rice. *Field Crops Res.*, 64: 177-185.
- Mahajan, S.; Tuteja, N. (2005).** Cold, salinity and drought stresses: An overview. *Arch. Biochem. Biophys.*, 444: 139-158.
- Mantri, N.; Patade V.Y.; Suprasanna P. ; Ford R.; Pang E. (2011).** Abiotic stress responses in plants present and future. In *Environmental*

adaptations to changing climate: Metabolism, productivity and sustainability, ed. Parvaiz Ahmad, and M.N.V. Prasad, 1–20. New York: Springer.

Marcano, A.K.; Guevara, P.M.; Oropeza, M.; Garcia, E. (2000). Improvement of somatic embryogenesis in sugarcane Venezuelan cultivars. ACV. 53(4) ISSN 0001-5504.

Mc Couch, S.R.; Doerge, R.W. (1995). QTL mapping in rice. Trends Genet., 11: 482-487.

Ming, R.; Moore, P.H.; Wu, K.K.; D'Hont, A.; Glaszmann, J.C.; Tew, T.L. (2006). Sugarcane improvement through breeding and biotechnology. Plant Breeding Reviews, 71: 15-118.

Mohamed, M.A.H.; Harris, P.J.C.; Henderson, J. (2000). *In vitro* selection and characterisation of a drought tolerant clone of tagetes minuta. Plant Sci, 159: 213–222.

Mohan, R.; Chui, E.A.; Biasi, L.A.; Soccol, R. C. (2005). Alternative *in vitro* propagation: Use of sugarcane bagasse as a sow cost support material during rooting stage of strawberry cv. dover. Brazilian Archives of Biology and Technology, 48: 37-42.

Munns, R.; Tester, M. (2008). Mechanisms of salinity tolerance. Annual Review in Plant Biology, 59: 651–681.

Murashige, T.; Skoog, F. (1962). A revised medium for rapid growth and bioassays with tobacco tissue cultures. Physiol. Plant, 15: 473-497.

Nayyar, H.; Walia, D.P. (2004). Genotypic variation in wheat in response to water stress and abscisic acid induced accumulation of osmolytes in developing grains. J. Agron. Crop Sci., 190: 39–45.

Ngezahayo, F.; Dong, Y.; Liu, B. (2007). Somaclonal variation at the nucleotide sequence level in rice (*Oryza sativa* L.) as revealed by RAPD and ISSR markers, and by pairwise sequence analysis. Journal of Applied Genetics, 48: 329–336.

Nieves, N.; Sagarra, F.; Gonza' lez R.; Lezcano, Y.; Cid, M.; Blanco, M. A.; Castillo, R. (2008). Effect of exogenous arginine on sugarcane (*Saccharum sp.*) somatic embryogenesis, free polyamines and the contents of the soluble proteins and proline. Plant Cell Tissue Organ Cult., 95: 313–320.

- Ortiz, R. (1998).** Critical role of plant biotechnology for the genetic improvement of food crops: Perspectives for the next millennium. *Electron. J. Biotechnol.*, [online] 1(3): Issue of August 15.
- Parida, K.A.; Das, A.B. (2005).** Salt tolerance and salinity effects on plants. *Ecotoxicol Environ Saf*, 60: 324–349.
- Patade, V.Y.; Suprasanna, P.; Bapat, V.A. (2008).** Effects of salt stress in relation to osmotic adjustment on sugarcane (*Saccharum officinarum* L.) callus cultures. *Plant Growth Regul.*, 55: 169-173.
- Patade, V.Y.; Bhargava, S.; Suprasanna, P. (2011).** Salt and drought tolerance of sugarcane under iso-osmotic salt and water stress: growth, osmolytes accumulation and antioxidant defense. *J. Plant Interact.*, DOI:10.1080/17429145.2011.557513.
- Patade, V.Y.; Bhargava, S.; Suprasanna, P. (2012).** Effects of NaCl and iso-osmotic PEG stress on growth, osmolytes accumulation and antioxidant defense in cultured sugarcane cells. *Plant Cell Tissue Organ Cult.*, 108: 279–286.
- Patade, V.Y.; Lokhande, V.H.; Suprasanna, P. (2014).** Exogenous Application of Proline Alleviates Salt Induced Oxidative Stress More Efficiently than Glycine Betaine in Sugarcane Cultured Cells. *Sugar Tech.*, 16 (1): 22-29. DOI 10.1007/s12355-013-0261-6.
- Paterson, A. H. (1996).** Making genetic maps, *Genome Mapping in Plants* R.G. Landes Company, San Diego, California; Academic Press, Austin, Texas, 23–39.
- Patzak, J. (2003).** Assessment of somaclonal variability in hop (*Humulus lupulus* L.) *in vitro* meristem cultures and clones by molecular methods. *Euphytica*, 131: 343-350.
- Rai, M.K.; Kalia, R.K.; Singh, R.; Gangola, M.P.; Dhawan, A.K. (2011).** Developing stress tolerant plants through *in vitro* selection An overview of the recent progress. *Environmental and Experimental Botany*, 71: 89–98.
- Rao, S.; FTZ, J. (2013).** *In vitro* selection and characterization of polyethylene glycol (PEG) tolerant callus lines and regeneration of plantlets from the selected callus lines in sugarcane (*Saccharum officinarum* L.). *Phsiol. Mol. Biol. Plants*, 19 (2): 261-268.

- Rasheed, R.; Wahid, A.; Farooq, M.; Hussain, I.; Basra, S. M. A. (2011).** Role of proline and glycinebetaine pretreatments in improving heat tolerance of sprouting sugarcane (*Saccharum* sp.) buds. Plant Growth Regul., DOI 10.1007/s10725-011-9572-3.
- Rasheed, S.; Fatima, T.; Husnain, Y.; Bashir, K.; Riazuddin, S. (2005).** RAPD characterization of somaclonal variation in indica basmati rice. Pakistan Journal of Botany, 37: 249-262.
- Reddy, A.R.; Chitanya, K.V.; Vivekanandan, M. (2004).** Drought induced responses of photosynthesis and antioxidant metabolism in higher plants. J. Plant Physiol., 161: 118-1202.
- Reis, R.R.; Brito da-Cunha B.A.D.; Martins, P.K.; Martins, M.T.B.; Alekcevetch, J.C.; Chalfun-Júnior A. et al. (2014).** Induced over-expression of AtDREB2A CA improves drought tolerance in sugarcane. Plant Science, 221-222: 59-68.
- Rhoades, J.D.; Loveday, J. (1990).** Salinity in irrigated agriculture. In American Society of Civil Engineers, Irrigation of Agricultural Crops (Monograph 30) Steward BA and Nielsen DR (eds) American Society of Agronomists, 1089-1142.
- Rohlf, F.J. (2000).** On the use of shape spaces to compare morphometric method. Hystrix, Italian J. Mammology (n.s.), 11(1): 8-24.
- Roy, M.; Hossain, M.; Biswas, A.; Biswas, M.K.; Islam, R. (2011).** Plant Regeneration through Somatic Embryogenesis from Leaf Sheath Derived Callus of Sugarcane (*Saccharum officinarum* L.) var. Isd -16. Plant Tissue Cult. & Biotech. 21(2): 143-149.
- Rus, A.M.; Panoff, M.; Perez-Alfocea, F.; Bolarin, M.C. (1999).** NaCl responses in tomato calli and whole plants. J. Plant Physiol., 155: 727–733.
- Sacchi, A.G.; Morgutti, S.; Abruzzese, A.; Alisi, C.; Cocucci, M.; Espen, L.; Leva, R.A.; Muleo, R.; Cocucci, M.S. (1995).** Changes in some physiological and biochemical parameters during two sub-cultures in Kiwi (*Actinidia deliciosa*) callus. Plant Sci., 106: 107–113.
- Sairam, R.K.; Tyagi, A. (2004).** Physiology and molecular biology of salinity stress tolerance in plants. Curr. Sci., 86: 407-421.

- Salama, I.; Ghnaya, T.; Hessini, K.; Messedi, D.; Savoure, A.; Abdelly, C. (2007).** Comparative study of the effects of mannitol and PEG osmotic stress on growth and solute accumulation in *Sesuvium portulacastrum*. *Environmental and Experimental Botany*, 61: 10–17.
- Sani, L.A.; Mustapha, Y. (2010).** Effect of genotype and 2,4-D concentration on callogenesis in sugarcane (*saccharum spp.* hybrids). *Bayero Journal of Pure and Applied Sciences*, 3(1): 238 - 240
- SAS Institute Inc. (1990).** SAS/STAT Guide for personal computers. Version 6, SAC Institute, Cary, NC, USA.
- Seki, M.; Kamei, A.; Yamaguchi-Shinozaki, K.; Shinozaki, K. (2003).** Molecular responses to drought, salinity and frost: common and different paths for plant protection. *Curr. Opin. Biotechnol.*, PMID: 12732320. 14: 194-199.
- Selman-Housein, G.; Lopez., M.A.; Ramos, O.; Carmona, E.R.; Arencibia, A.D.; Menedez, E.; Mirinda, F. (2000).** Towards the improvement of sugarcane bagasse as raw material for the production of paper pulp and animal feed. *Developments in Plant Genetics and Breeding*, 5: 189-193.
- Singh, R. (2003).** Tissue culture studies of Sugarcane. *Masters of Science in Biotechnology*, Thapar Institute of Engineering and Technology Patiala –147004, India.
- Singh, R.K.; Mishra, S.K.; Singh, S.P.; Mishra, N.; Sharma, M.L. (2010).** Evaluation of microsatellite markers for genetic diversity analysis among sugarcane species and commercial hybrids. *Australian Journal of Crop Science*, 4: 116-125.
- Snowdon, R.; Friedt, W. (2004).** Molecular markers in Brassica oilseeds breeding: Current status and future possibilities. *Plant Breed.*, 123: 1–8.
- Sreenivasan, T.V.; Ahoowahlia B.S.; Heinz, D.J. (1987).** Cytogenetics. In: *Sugarcane improvement through breeding*. Heinz, D.J (ed) Elsevier, Amsterdam. Pp. 221-223.
- Stevenson, G.C. (1965).** Genetics and breeding of sugarcane. Longmans, London. Pp. 1-284.
- Stuber, C.W.; Polacco, M.; Senior, M.L. (1999).** Synergy of empirical breeding, marker assisted selection and genomics to increase crop yield potential. *Crop Sci.*, 39: 1571–1583.

- Subbarao, M.; Shaw, M.A.E. (1985).** A review of research on sugarcane soils of Jamaica. Proceeding of Meeting West Indies Sugar Technol., 2: 343-355.
- Sumarani, G.O.; Pillai, S.V.; Harisankar, P ; Sundaresan, S. (2004).** Isozyme analysis of indigenous cassava germplasm for identification of duplicates. Genetic Resources and Crop Evolution, 51:205-209.
- Suriyan Cha-um ; Kirdmanee, C. (2009).** Proline accumulation, photosynthetic abilities and growth characters of sugarcane (*Saccharum officinarum* L.) plantlets in response to iso-osmotic salt and water-deficit stress. Agricultural Sciences in China, 8(1): 51-58.
- Tal, M. (1983).** Selection for stress tolerance. In Evans DA, Sharp WR, Ammirato PV, Yamada Y (Eds): Handbook of plant cell culture, (Vol.1). Techniques for propagation and breeding. Macmillan publishing Co., New York. pp 461-488.
- Tarimo, A.J.P.; Takamura, Y.T. (1998).** Sugarcane production, processing and marketing in Tanzania. African Study Monographs, 19: 1-11.
- Thomas, P. (2000).** Egypt Sugar Annual "GAIN Report" Global Agriculture Information Network Foreign Agricultural Service. P.1-8.
- Thomas, W. (2003).** Prospects for molecular breeding of barley. Ann. Appl. Biol., 142: 1–12.
- Tonon, G.; Kevers, C.; Faivre-Rampant, O.; Graziani, M.; Gaspar, T. (2004).** Effect of NaCl and mannitol iso-osmotic stresses on proline and free polyamine levels in embryogenic *Fraxinus angustifolia* callus. J. Plant Physiol., 161: 701–708.
- Tuberosa, R.; Salvi, S.; Sanguineti, M.C.; Maccaferri, M.; Giuliani, S.; Landi, P.(2003).** Searching for quantitative trait loci controlling root traits in maize: A critical appraisal. Plant Soil, 255: 35–54.
- Van Sanford, D.; Anderson, J.; Campbell, K.; Costa, J.; Cregan, P.; Griffey, C.; Hayes, P.; Ward, R. (2001).** Discovery and deployment of molecular markers linked to fusarium head blight resistance: An Integrated system for wheat and barley. Crop Sci, 41: 638–644.
- Van Sint Jan, V.; Skali-Senhaji, N.; Bouharmont, J. (1990).** Comparaison de différentes variétés de riz (*Oryza sativa* L.) pour leur aptitude à la culture *in vitro*. Belg. J. Bot., 123(1/2): 36-44.

- Wahid, A. (2004).** Analysis of toxic and osmotic effects of sodium chloride on leaf growth and economic yield of sugarcane. *Botanical Bulletin of Academia Sinica*, 45: 133–141.
- Waller, R.A.; Duncan, D.B. (1969).** "A bayes rule for the symmetric multiple comparison problem". *Journal of the American Statistical Association*, 64: 1484-1504.
- Wang, W.; Vinocur, B.; Altman, A. (2003).** Plant responses to drought, salinity and extreme temperatures: towards genetic engineering for stress tolerance. *Planta*, 218: 1-14.
- Waston, D.J. (1952).** The physiological basis of variation. *Advanced Agronomy*, 4: 101-145.
- Watanabe S, Kojima K, Ide Y, Sasaki S (2000)** Effects of saline and osmotic stress on proline and sugar accumulation in *Populus euphratica in vitro*. *Plant Cell Tissue Organ Cult.*63:199–206.
- Watt, M.P.; Banasiak, M.; Reddy, D.; Albertse, E.H. ; Snyman, S.J. (2009).** *In vitro* minimal growth storage of *Saccharum spp.* hybrid (genotype 88H0019) at two stages of direct somatic embryogenic regeneration. *Plant Cell Tissue Organ Cult.*, 96: 263–271.
- Weeden, N.; Timmerman, G. ; Lu, J. (1994).** Identifying and mapping genes of economic significance. *Euphytica*, 73: 191–198.
- Weising, K.; Nybom, H.; Wolff, K.; Meyer, W. (1995).** Applications of DNA fingerprinting in Plants and Fungi DNA Fingerprinting in Plants and Fungi, CRC Press, Boca Raton.
- Wiedenfeld, B. (2008).** Effects of irrigation water salinity and electrostatic water treatment for sugarcane production. *Agric. Water Manag.*, 95: 85–88.
- Williames, J.K.; Kubelik, A.; Livak, K.; Rafalsky, J.; Tingey, S. (1990).** DNA polymorphisms amplified by arbitrary primer and useful as genetic markers. *Nucleic Acids Res.*, 18: 6531-6535.
- Williams, K.J. (2003).** The molecular genetics of disease resistance in barley. *Aust. J. Agric. Res.*, 54: 1065–1079.
- Winter, P.; Kahl, G. (1995).** Molecular marker technologies for plant improvement. *World Journal of Microbiology & Biotechnology*, 11: 438–448.

- Yeo, A. (1998).** Molecular biology of salt tolerance in the con-text of the whole-plant physiology. *J. Exp. Bot.*, 49: 915–929.
- Zhu, J.K. (2002).** Salt and drought stress signal transduction in plants. *Annu.Rev. Plant Physiol. Plant Mol. Biol.*, 53: 247–273.
- Zuurbier, P.; Van de Vooren, J. (2008).** Sugarcane ethanol-contributions to climate change mitigation and the environment. Wageningen Academic Publishers, Netherlands. Pp. 1-256.