

BIBLIOGRAPHY

-
- Agarwal, S., Sairam, R.K., Srivastava, G.C. and Meena, R.C. (2005). Changes in antioxidant enzymes activity and oxidative stress by abscisic acid and salicylic acid in wheat genotypes. *Biologia Plant.*, **49**: 541-550.
- Aktas, Y.L. (2001). *Vitis vinifera*'da salisilik asit uygulamasunn yaprak proteinleri icerigi uzerine etkileti. *Ev Fen Bil Enst Biyoloji ABD Doktora Tezi, Izmir*.
- Alberts, B., Johnson, A., Lewis, R., Roberts, T. M. and Wolter P. (2002). Peroxisomes in Molecular Biology of the cell 4th ed. Carland.
- Aldesuquy, H.S., Mankarios, A.T., Awad, H.A. (1998). Effect of some antitranspirants on growth, metabolism and productivity of saline treated wheat plants. Induction of stomatal closure, inhibition of transpiration and improvement of leaf turgidity. *Acta Bot Hungarica.*, **41**: 1-10.
- Alfonso, L.S. and Rodolfo, M.M. (2007). Effects of salicylic acid on the biproductivity of plants. *Springer*, pp. 15-23.
- Alfonso, M., Funck, D., Muhlenbock, P., Kular, B., Mullineaux, P. M. and Karpinski, S. (2006). Controlled levels of Salicylic acid are required for optimal photosynthesis and redox homeostasis. *Journal of Experimental Botany.*, **57**(8) : 1795-1807.
- Al-Hakim, A.M.A. and Hamada, A.M. (2001). Counteraction of salinity stress on wheat plants by grain soaking in ascorbic acid, thiamin and salicylate. *Biol.Plant*, **44**: 253-261.
- Alpaslan, M., Cleck, N., Guneri, E., and Ali, I. (2005). Effects of exogenously applied salicylic acid on the induction of multiple stress tolerance and mineral nutrition in maize (*Zea mays* L.). *Archives-of-Agronomy and Soil-Science*, **51** (6) : 687-695.
- Alsaadawi, Ibrahim, S. and Satta. M., Al-Hadithy and Mahmad, B., Arif (1986). Effect of three phenolic acids on chlorophyll content and iron uptake in cowpea seedlings. *J. chem. Ecology*, **12** (1): 221-228.
- Alvarez, M.E. (2000). Salicylic acid in the machinery of hypersensitive cell death and disease resistance. *Plant Mol. Biol.*, **44**:429-442.
- Aly, S.S.M. and Soliman S.M. (1998). Impact of some organic acids on correching iron chloriosis in two soyabean genotypes grown in calcareous soil. *Nutr. Cycling Agroecosyst*, **51**: 185-91.
- Anandhi, S. and Ramanujam, M. P. (1997). Effects of salicylic acid on black gram (*Vigna mungo*) cultivars. *Indian J. Plant Physiol.*, **2**(2): 138 – 141.
- Ananieva, A. Christov, K. N., Popova, L. P. (2004). Exogenous treatment with salicylic acid leads to increased antioxidant capacity in leaves of barley plants exposed to paraquat. *J. Plant Physiol.*, **161**: 319-328.
-

-
- Ananieva, E. A., Alexieva, V. S. and Popova, L. P. (2002). Treatment with salicylic acid decreases the effects of paraquat on photosynthesis. *J. Plant Physiol.*, **159**: 685-693.
- Anuradha, M., Lakshmi, P. and Narayanan, A. (1995). Phosphorus nutrition of plants. *Agros. Ann. Rev. Pl. Physiol. (B and A). II. S.S. Purohit (Ed.)* pp.339-370.
- Appenroth, K.J., Oelmüller, R., Schuster, C. and Mohr, H. (1992). Regulation of transcript level and synthesis of nitrate reductase by phytochrome and nitrate in turions of *Spirodella polyrhiza* (L.) Schleiden; *Planta*, **188**: 587-593.
- Apte, P.V. and Laloraya, M.M. (1982). Inhibitory action of phenolic compounds on abscisic acid-induced abscission. *J. Expt. Bot.* **33**: 826-830.
- Arfan, M., Athar, H. R. and Ashrof, M (2007). Does exogenous application of salicylic acid through the rooting medium modulate growth and photosynthetic capacity under salt stress? *Journal of Plant Physiology* (I Press).
- Arnon, D.I. (1949). Copper enzymes isolated chloroplast: Polyphenol oxidase in *Beta vulgaris*. *Plant Physiol.*, **25**: 1-25.
- Arnon, D.I. and Stout, P.R. (1939). *Plant Physiol.*, **14**: 599.
- Arora, A. and Singh, V.P. (1999). 5- Sulphosalicylic acid- a novel antisenescence compound for cut gladiolus flowers. *National Seminar on Role of Plant Physiology and Bi-Technology in Agriculture and Industry, Osmania University, Hyderabad.*
- Arora, A., Singh, V. P., Agarwal, G., and Choudhary, D. (2007). Genetic regulation of senescence associated genes and ethylene receptors by Salicylic acid in ethylene insensitive Gladiolus flower, pp. 216. *National Seminar on plant Physioloty, Souvenir and Abstracts, Dr. B. S. Kokan Krishi Vidyapeeth, Dapoli.*
- Asada, K. (1996). Radical production and scavenging in the chloroplasts. In : Baker N. R. (ed) *Photosynthesis and the Environment*. Kluwer, Dordrecht. pp. 123- 150.
- Asthana, J.S. and Srivastava, H.S. (1978). Effect of presowing treatment of maize seed with ascorbic acid and salicylic acid on seed germination, seedling growth and nitrate assimilation in the seedling. *Indian J. Plant Physiol.*, **21** (2) : 150-155.
- Awasthi, V. and Garg, S.K. (2007). Effect of salicylic acid on enzymes of ammonium assimilation in maize in maize seedlings. *Indian J. Plant Physiol.*, **12** (4): 393-395.
- Barbara, M., Schulz, M. and Schnabl, H. (1972). Effect of salicylic acid on growth and stomatal movements of *Vicia faba* L. evidence for salicylic acid metabolisation. *J. Chem. Ecol.*, **18** (9): 1525-1539.
- Barde, B. D., Phatangare, M. E. (2007). Growth and yield of soyabean is influenced by foliar spray of growth regulators and urea. *National Seminar on 'Physiological and Molecular Approaches for Increasing Yield and Quality of*
-

Agricultural, Horticultural and Medicinal Plants under Changing Environment

- Barkosky, R.R. and Einhelling, F.A. (1993). Effects of salicylic acid on plant-water-relationships. *J. Chem Ecol.*, **19**: 237-247.
- Bartosoz, G. (1997). Oxidative stress in plants. *Acta Physico Plantarum*, **19**: 47-64.
- Basha, S.K., Mahaboot and Rajeshwara Rao, G., (1980). Effect of phosphorus deficiency on growth and metabolism in peanut (*Arachis hypogaea* L.) *Indian J. Plant Physiol.* **23** : 273-277.
- Baziramkenya, R., Simard, R.R. and Lerous, G.D. (1994). Effect of benzoic acid and coumaric acid on growth, mineral composition and chlorophyll content of soyabean. *Journal of chemical ecology*, **20** (11): 2821-2833.
- Bedi, S. and Dhingra, M. (2007). Emergence and seedling establishment in maize under low temperature stress and its amelioration with salicylic acid. *Indian J. Plant Physiol.*, **2**(4) : 383- 387.
- Beevers, V. and Hegeman, R. (1969). Glyoxysomes of castor bean endosperm and their relation to gluconeogenesis. *Ann N.Y. Acad. Sci.*, **168**:313-324.
- Bergmann, C.W., Ito, Y., Singer, D., Albresheim, P., Darvill, A.G., Benhamou, N., Nuss, L., Salvi, G., Cervone, F. and De Lorenzo, G. (1994). Polygalacturonase-inhibiting protein accumulates in *Phaseolus vulgaris* L. in response to wounding, elicitors and fungal infection. *Plant J.*, **5** (5): 625-634.
- Bergmeyer Hans Ulrich (1974). *Methods of Enzyme Analysis* (Vol.2). Academic press Inc., New York, San Francisco, London, pp. 673-684.
- Beringer, H. and Taha, M.A. (1976). Calcium absorption by two cultivars of groundnut (*Arachis hypogaea* L.) *Exp. Agric.*, **12**: 107-111.
- Bezrukova, M. V., Sakhabutdinova, R., Fatkhutdinova, R. A., Kyldiarova and Shakirova, F. (2001). The role of hormonal changes in protective action of salicylic acid on wheat seedlings under water deficit. *Agrochemia (Russ)*, **2**: 51-54.
- Bhupinder, S. and Usha, K. (2003). Salicylic acid induced physiological and biochemical changes in wheat seedlings under water stress. *Plant Growth Regul.*, **39**: 137-141.
- Bi, Y.M., Kenton, P., Mur, L., Darby, R., and Draper, J. (1995). Hydrogen peroxide does not function downstream of salicylic acid in the induction of PR-protein expression. *Plant J.*, **8**: 235-245.
- Blee, K.A., Jupe, S.C., Richard, G., Bolwell, G.P.(2001). Molecular identification and expression of the peroxidase responsible for the oxidative burst in French bean (*Phaseolus vulgaris* L.) and related members of the gene family. *Plant Mol Biol.*, **47**: 607-20.
-

-
- Blee, KA, Jupe, SC, Richard, G., Bolwell, GP.(2001). Molecular identification and expression of the peroxidase responsible for the oxidative burst in French bean (*Phaseolus vulgaris* L.) and related members of the gene family. *Plant Mol Biol.*, **47**: 607-620.
- Borsani, O. V., Valpuesta and Botella, M. A. (2001). Evidence for a role of salicylic acid in the oxidative damage generated by NaCl osmotic stress in Arabidopsis seedlings. *Plant Physiol.*, **126**: 1024-1030.
- Bowler, C., Montagu, M. V. and Inze, D. (1992). Superoxide dismutase and stress tolerance. *Annu Rev. Plant Physiol Plant Mol Biol.*, **43**: 83- 116.
- Breda, C., Buffard, D., Van Huystee, R.B. and Esnault, R. (1993). Differential expression of two peanut peroxidase cDNA clones in peanut plants and cells in suspension culture in response to stress. *Plant Cell Rep.*, **12b**: 268-272.
- Brederode, F.T., Linthorst, H.J.M. and Bol, J.F. (1991). Differential induction of acquired resistance and PR gene expression in tobacco by virus infection, ethephon treatment, UV light and wounding. *Plant Mol. Biol.* **17**: 1117-1125.
- Britton, G. (1988). Biosynthesis of carotenoids. In Plant Pigments (Ed. T. W. Goodwin), Pb. *Academic Press, London*, pp 133-182.
- Bussler, W. (1960). Manganese deficiency in groundnuts. *Z., Pflanzenernahar*, **90**:1-4.
- Cammarano, P., Felsani, A., Gentile, M., Gualerzi, C., Romes, C. and Wolf, G. (1972). Formation of active hybrid 80S-particles from subunits of pea seed-lings and mammalian liver ribosomes. *Biochem. Biophys. Acta*, **281**:625-642.
- Campbell, W.H. (1988). Nitrate reductase and its role in nitrate assimilation in plants. *Physiol Plant*, **74**: 214-219.
- Campbell, W.H. (1999). Nitrate reductase structure, function and regulation - Bridging the gap between biochemistry and physiology. *Plant Physiol Plant Mol Biol.*, **50**: 277-303.
- Campbell, W.H. and Remmler, J.L. (1986). Regulation of corn leaf nitrate reductase. *Plant Physiol.*, **80**: 435-441.
- Caspersen, S., Asp, H., Jensen, P., Alsanius, B.W. (2004). Response of young hydroponically grown tomato plants to phenolic acids. *Scientia-Horticulturae-(Amsterdam)*. **100** (1-4): 23-37.
- Castillo, I. J, and Greppin, H. (1988). Extracellular ascorbic acid metabolism in *Sedum album* L. leaves after Ozone exposure. *Environ Exp. Bot.*, **28**: 231-238.
- Castro, P.R.C., Oliveria, G.D., Appezzato, B., (1984). Action of plant growth regulators on mineral nutrition in groundnut. *Revista de Agricultura, Piracicaba, Brazil*, **59** (1) : 49-58.
-

-
- Chaitanya, KVD, Sundar, Masilamani, S. and Reddy, A. (2002). Variation in heat stress-induced antioxidant enzyme activities among 3 mulberry cultivars. *Plant Growth Regul.*, **36**:175-180.
- Chakravarty, M. and Burma, D. P. (1959). Enzymes of the pentose phosphate pathway in the mungbean seedlings. *Biochem J.*, **73**: 48 – 53.
- Chandok, M.R. and Sopory, S.K. (1996). Phosphorylation/ dephosphorylation steps are key events in the phytochrome-mediated enhancement of nitrate reductase mRNA levels and enzyme activity in maize. *Mol. Gen Genet*, **251**: 599-608.
- Chandra, K. and Das, M. R. (2007). Effect of KNO₃, Vitamin B-6 and Salicylic acid on growth, False siliqua formation and seed yield in Toria. *Indian Journal of Plant Physiology*, **12**(1): 78 - 82.
- Chavan, S.R. (1987). Physiological studies in nitrogen metabolism on groundnut (*Arachis hypogaea* L.) M. Phil thesis submitted to the Shivaji University, Kolhapur, India.
- Chen, and Klessing, D.F. (1991). Identification of a soluble salicylic acid binding protein that may function in signal transduction in the plant disease resistance response. *Proc.Natl.Acad.Sci. USA* **88**: 8179-83.
- Chen, R., Le Marechal, P., Vaidal, J., Jacquot, J.P. and Gadal, P. (1988). Purification and comparative properties of the cytosolic isocitrate dehydrogenase (NADP) from pea (*Pisum sativum*) roots and green leaves. *Euro. J., Biochem.*, **175**: 565-572.
- Chen, Z, Silva, H, and Klessing, D. F. (1993b), Active oxygen species in the induction of plant systemic acquired resistance by salicylic acid. *Science*, **262**: 1883-1886.
- Chen, Z. and Klessing, DF (1991). Identification of a soluble salicylic acid binding protein that may function in signal transduction in the plant disease resistance response. *Proc. Natl Acad. Sci., USA*, **88** (18): 8179-83.
- Chen, Z., Ricigliano, J. W. and Klessing D. F. (1993a). Purification and characterization of a soluble salicylic acid – binding protein from tobacco. *Proc Natl. Acad Sci., USA*, **90**: 9533-9537.
- Chibbar, R. N., Cella, R. and Van Haystee, R. B. (1984). The heme moiety in peanut peroxidase. *Can J. Biochem.*, **62**: 1046 – 1050.
- Chibber, R. N. And Van Huystee, R. B. (1986). Site of hemesynthesis in cultured peanut cells. *Phytochemistry*, **25**: 285 - 287.
- Chittoor, J. M., Leach, J. E. and White, F. F. (1999). Induction of peroxidase during defense against pathogens. In Datta SK, Muthukrishnans, editors. Pathogenesis related proteins in plants. *Boca Raton, FL; CRC Press*, 171-93.
- Chou, K.H. and Splitstoesser, W.E. (1972). Glutamate dehydrogenase from pumpkin cotyledons. *Plant Physiol.*, **49**: 350-554.
-

-
- Christensen, AB, Cho, BH, Naesby, M, Gregersen, PL, Brandt, J, Madriz-ordenana, K., Collinge, DB, Thordal Christensen, H. (2002). The molecular characterization of two barley proteins establishes the novel PR-17 family. *Mol Plant Pathol.*, 3: 135-144.
- Clarke, SF, Burritt, DJ, Jameson, PE, Guy, PL (1998). Influent of plant hormones on avirus replication and pathogenesis - related proteins in *Phaseolus vulgaris* L. infected with clover virus mosaic potexvirus. *Physiol Mol Plant Pathol.*, 53:195-207.
- Clarke, JD, Vloko, SM, Ledford, H., Ausubel, FM, Dong, XN (2002). Roles of salicylic acid, jasmonic acid and ethylene in crp-induced resistance in *Arabidopsis*. *Plant cell*, 12: 2175-2190.
- Clarke, SF, Guy, PL, Burritt, DJ, Jameson, PE (2002b). Changes in the activities of antioxidant enzymes in response to virus infection and hormone treatment. *Physiol. Plant*, 114: 157-164.
- Clarke, SM, Mur, LAJ, Wood, JE, Scott, IM (2004). Salicylic acid dependent signaling promotes basal thermotolerance but is not essential for acquired thermo tolerance in *Arabidopsis thaliana*. *Plant J*, 38: 432-447.
- Clarkson, D.T. and Hanson, J.B. (1980). The mineral nutrition of higher plants. *Ann. Rev. Plant Physiol*, 31: 239-298.
- Cleland, C.F. and Ajami, A. (1974). Identification of the flower – inducing factor isolated from Aphid Honeydew as being salicylic acid. *Plant Physiol.*, 54(6): 904-906.
- Colona, S, Gaggero, N., Richelimi, C. and Prata, P. (1999). Recent biotechnological developments in the use of peroxidase. *Trends in Biotechnology*, 17: 163 – 168.
- Coquoz, J.L., Buchala, A. and Metraux, J.P. (1998). The biosynthesis of salicylic acid in potato plants. *Plant-Physiology-Rockville*. 117 (3) 1095-1101.
- Cormier, M.J., Jarrett, H.W. and Charbonneau, H. (1982). Role of Ca⁺⁺-calmodulin in metabolic regulation in plants. pp. 125-139. In S. Kakiuchi et.al. (ed.) *Calmodulin and intracellular Ca⁺⁺ reporters*. Plenum Press, New York.
- Cram, W.J. (1976). Negative feedback regulation of transport in cells. The maintenance of turgor, volume and nutrient supply in U. Luttage and M.G. Pitman (ed.) *Transport in plants II part A cells*. Encyclopedia of *Plant Physiol.* new series, Springer-Verlag, Berlin. 2A: 284-316.
- Cutt, J.R. and Klessing, D.F. (1992). Pathogenesis-related proteins. In plant Gene Research, *Genes Involved in plant Defense* (Boller, T. and Meins, F. eds). Wein/New York, Springer, pp. 209-243.
- Czerpak, R., Dobrzyn, P., Krotke, A. and Kicinska, E. (2002). The effect of auxin and salicylic acid on chlorophyll and carotenoid contents in *Wolffia arrhiza* (L.) Wimm. (Lemnaceae) growing on media of various trophicities. *Polish Journal of Environmented Studies*, 11 (3): 231-235.
-

-
- Dat, JF, Foyer, CH, Scott, IM (1998). Changes in salicylic acid and antioxidants during induction of thermotolerance in mustard seedlings. *Plant Physiol.*, **116**: 1351-1357.
- Day, DA, Norman, C., Howell, KA, Miller, AH, Whelan, JM and Day, DA (2004). Salicylic acid is an uncoupler and inhibitor of Mitochondrial Electron Transport. *Plant Physiology*, **134**: 492-501.
- Dean, R.A., and Kue, J. (1986a). Induced systemic protection in cucumber: Time of production and movement of the signal. *Physiopathology*, **76**: 966-970.
- Dean, R.A., and Kue, J. (1986b) : Induced systemic protection in cucumber: The source of the signal : *Physoil. Mol Plant Pathol.*, **28**: 227-233.
- Dekock, P.C. and Grabowska flora, B. (1974). The effect of salicylic acid on the growth of *Lemna gibba*. *Ann. Bot.*, **38**: 903-908.
- Delledonne, M., Xia, Y., Dixon, RA, Lamb, C. (1998). Nitric oxide functions as a signal in plant disease resistance. *Nature*, **394**: 585 – 588.
- Dhaliwal, R. K., Malik, C. P., Gosal, S. S. and Daliwal, L. S. (1997). Studies on hardening of micropropagated sugarcane (*Saccharum officinarum* L.) plantlet. II Leaf parameters and biochemical estimators. *Ann Biol. Ludhiana*, **13**: 15-20.
- Diaz, M., Achkor H., Titarenko, E. and Martinez, MC (2003). The gene encoding glutathione-dependent formaldehyde dehydrogenase /GSNO reductase is responsive to wounding, jasmonic acid and salicylic acid. *EBS Lett.*, **543** (1-3): 136 - 139.
- Doonera, K., Daniel, F. and Shaha, J. (2000). Resistance to Turnip crinckle virus in *Arabidopsis* is regulated by two host genes and is salicylic acid dependent but NPRI, Ethylene and Jasmonate Independent. *Plant Cell*, **12**: 677-690.
- Du, H. and Klessing, D. F. (1997). Role of salicylic acid in the activation of Defense Responses in catalase Deficient Transgenic Tobacco. *Molecular Plant- Microbe Interactions*, **10** (7): 922-925.
- Dunford, H. B. (1999): Heme prooxidase nomenclature: *Plant Peroxidase Newsletter Issue*, **13**: 65 – 71.
- Dwivedi, R. S. (1986). Mineral nutrition and scope of breeding groundnut for nutrient deficiency resistance in 'Recent advances in groundnut productivity research'. Proceedings a summer Institute held at NRCG, Junagadh (India.)
- Eastmond, PJ, Graham, IA (2001). Re-examining the role of the glyoxylate cycle in oilseeds. *Trends Plant Sci.*, **6**: 72-78.
- Echevarria - Machado, I., Esobedo, G.M. R. and Larque - Saavedra, A. (2007). Responses of transformed *Catharanthus roseus* roots to Femtomolar concentrations of salicylic acid. *Plant Physiology and Biochemistry*, **45** (6-7): 501 -507.
-

-
- Einhelling, F.A. (1986). Mechanisms and modes of action of allelochemicals. In : The science of Allelopathy Putnam, A.R. Tang, C.S. (eds). John Wiley, New York, pp. 317.
- El-Tayeb, M, El-Enamy, A, Ahmed, N. (2006). SA-induced adaptive response to copper stress in sunflower (*Helianthus annuus* L.). *Plant Growth Regulation*, pp. 191-199.
- El-Tayeb, M.A. (2005). Response of barley grains to the interactive effect of salinity and salicylic acid. *Crop Sci.*, **45**: 988-955.
- Enyedi, A, Yalapani, N, Silverman, P., Raskin I (1992). Localization, conjugation and function of SA in tobacco during the hypersensitive reaction in tobacco mosaic virus. *Proceedings of the National Academy of Sciences, USA.*, **89**: 2480-2484.
- Enyedi, A.J. and Raskin, I. (1993). Introduction of UDP-glucose: Salicylic acid glucosyl-transferase activity in tobacco mosaic virus inoculated tobacco (*Nicotiana tabaccum*) leaves. *Plant Physiol.*, **103**: 1375-1380.
- Faheed, F.A. and Mahmoud, S.Y.M. (2006). Induction of Resistance in *Phaseolus vulgaris* against TNV by Salicylic acid and kinetin. *International Journal of Agriculture and Biology*. **1**: 47-51.
- Fariduddin, Q., Hayat, S. and Ahmad, A. (2003). Salicylic acid influences net photosynthetic rate, carboxylation efficiency, nitrate reductase activity and seed yield in *Brassica juncea*. *Photosynthetica*, **41** (2): 281-284.
- Fernandes, C.F., Moraes, V.C.P., Vasconcelos, I.M., Silveira, J.A.G. and Oliveria, J.T.A. (2006). Induction of an anionic peroxidase in cowpea leaves by exogenous salicylic acid. *Journal of Plant Physiology*, **163**: 1040-1048.
- Foyer, C.H., Descourvieres, P., and Kunert, KJ. (1994). Protection against oxygen radicals: An important defense mechanism studied in transgenic plants. *Plant Cell Environ.* **17**: 507-523.
- Franck , Th, Kevers, Ci and Gasper, Th, (1995). Protective enzymatic systems against activated oxygen species compared in normal and virified shoots of *Prunus avium* L. raised *in vitro*. *Plant Growth Regulation*, **16**: 253 – 256.
- Fric, F. (1996). Oxidative enzymes In “*Encyclopedia of Plant Physiology*” (Eds) Pirdson, A. and Zimmermann, M. H. pp 617 –631, *Springer Verlag, New york*.
- Friedman, H, Meir, S. Halevy, A. H. and philosoph – Hadasa, S. (2003) Inhibition of the gravitropic bending responses of flowering shoots by salicylic acid. *Plant Science*, **165** (4): 905 -911.
- Gaffney, T., Friedrich, L., Vernooji, B., Negrotto, D., Nye, G., Uknes, S., Ward, E., Kessman, H., and Ryals, J. (1993). Requirement of salicylic acid for the induction of systemic acquired resistance. *Science*, **261**: 754-456.
- Galis, I, Smith, J.L. and Jameson, P.E. (2004). Salicylic acid, but not cytokinin-induced, resistance to WCIMV is associated with increased expression of SA-
-

-
- dependent resistance genes in *Phaseolus vulgaris*. *J. Plant Physiol.*, **161**: 459-466.
- Galis, I., Jennifer, L. and Jameson, P.E. (2004). Salicylic acid but not cytokinin-induced, resistance to WCIMN is associated with increased expression of SA-dependent resistance genes in *Phaseolus vulgaris*. *J. Pl. Physiol.*, **161**: 459-466.
- Gaudinova, A. (1983). *Biol. Plant.*, **31**: 239-298.
- Ghai, N., Setia, R. C. and Setia, N. (2002). Effect of pactobutrazol and salicylic acid on chlorophyll content, hill activity and yield components in *Brassica napus* L. (CV. GSL- 1). *Phytomorphology*, **52** (1): 83-87.
- Ghulam, M., Rehana, A., Shahbaz, A., Majid, S.A. (2007). The yield and yield components of pea (*Pisum sativum* L.) as influenced by salicylic acid. *Pakistan-Journal-of-Botany*, **39** (2): 551-559.
- Gibernau, M., Barade, D., Moisson, M. and Trombe, A. (2005). Physical constraints on temperature difference in some Thermogenic Aroid inflorescence. *Annals of Botany*, **96**(1): 117-125.
- Greenway, H. and Manns, R. (1980). Mechanism of salt tolerance in nonhalophytes. *Ann. Rev. Plant Physiol.*, **31**: 149-190.
- Grewal, M.K., parmar, U., Bhatia, D.S., Malik, C.P. and Singh, P. (1989). Effect of phenolic acids on growth and nitrogen metabolism in peanut (*Arachis hypogaea*). Var. M-13., in expanding Horizons of Botanical Research, (Ed.) T.N. Nag. P. 207-216, (Jaipur: Arihant Publishers).
- Groenewald and Westhuizen, (1998). *Biologia Plantarum*, **41**: 475-479.
- Guedes, M.E.M., Richmond, S., and Kuc, J. (1980). Induced systemic resistance to anthracnose in cucumber as influenced by the location of the inducer inoculation with *Colletotrichum lagenarium* and the onset of flowering and fruiting. *Physiol. Plant Pathol.*, **17**:229-233.
- Guerrero, M.G., Vega, J.M. and Losada, M. (1981). The assimilatory nitrate reducing system and its regulation. *Ann. Rev. Plant Physiol.*, **32**: 169-204.
- Gunes, A., Inal, A., Alpaslan, M., Eraslan, F., Bagci, E. G. and Cicek, N., (2007). Salicylic acid induced changes on some physiological parameters symptomatic for oxidative stress and mineral nutrition in maize (*Zea may* L.) grown under salinity. *Journal of Plant Physiology*, (In press).
- Gunezi, W.D. and Mc Calla, T.M. (1966). Phytotoxic substances extracted from soil. *Proc. Soil Sci. Soc. AM.* **30**: 214-216.
- Gutierrez- Coronado, M. A., Trejo - Lopez, C. and Larque- Saavedra, A. (1998). Effects of SA on the growth of roots and shoots in soyabean. *Plant Physiol Biochem.*, **36**: 563-565.
- Haper, J.R. and Balke, N.E. (1981). Characterization of the inhibition of K⁺ absorption in Oat roots by salicylic acid. *Plant Physiol.*, **68**: 1349-1353.
-

- Harris, H.C. (1959). Research on peanuts during the last twenty years. *Soil and crop Science Soc. Florida Proc.*, **19**: 208-226.
- Hartman, W.J., Akawie, R.I. and Clark, W.G., (1955). Competitive inhibition of 3,4-dihydroxy-phenylalanine (DOPA) decarboxylase *in vitro*. *J. biol. Chem.*, **216**: 507 ff.
- Hartzog, D.L. and Adams, J.F. (1988). Soil fertility experiments with peanuts in Albana, 1973-1986. *Albana Agric. Exp. Stn. Bull.*, **594**: 1-39.
- Hasegawa, PM, Bressan, RA, Zhu, JK, Bohnert, HJ (2000). Plant cellular and molecular responses to high salinity. *Annual Review of Plant Physiology and Plant Molecular Biology*, **51**: 463-499.
- Hawk, P.B., Oser, B.L. and Summeson, W.H. (1984). Practical Physiological Chemistry Pb. The Blakiston Co., USA.
- He, Y. L., Liu, Y. L., Chen, Q. and Bian, A. H. (2002). Thermotolerance related to antioxidation induced by Salicylic acid and heat hardening in tall fescuse seedlings. *J. Plant Physiol. Mol. Biol.*, **28** (2): 89-95.
- He, Y.L, Liu, Y.L., Chen, Q., Bian, A.H. and Chen, W. (2001). Optimum pH for four antioxidant enzymes in seedlings of tall fescuse and kentucky Bluegrass (In Chinese) with English abstract). *J Nanjing Agric Univ.*, **24**: 1-4.
- Heitholt, J.J., Schmidt, J.H. and Mulrooney, J.E. (2001). Effect of foliar applied salicylic acid on cotton flowering, Boll Retention, and yield. *Journal of the Mississippi Academy of Sciences*, **6** (2): 105-108
- Hewitt, E.J. and T.A. Smith 1975. Plant Mineral Nutrition, Wiley, New York.
- Hiraga, S., Sasaki, K., Ito, H., Ohashi, Y. and Matsui, H. (2001). A large family of class III plant peroxidases. *Plant and Cell Physiology*, **42**(5): 462-468.
- Hiremath, S. M., Saisankar, S., Chette, M. B. and Navalagatti, C. M. (1998). Influence of plant growth regulators, chemicals and nutrients on growth parameters and yield potential in greengram. *National Seminar on role of plant physiology and bio- technology in Agriculture and industry. Osmania University*.
- Hoff, T., Troung, H.N and Caboche, M. (1994). The use of mutants and transgenic plants to study nitrate assimilation : *Plant Cell Environ.*, **17** : 489-506.
- Hoisington *et al.*, (1999). Proceedings of the national Academy of Sciences, USA, **96**: 5937-5943.
- Horiguchi, T. (1988). Mechanism of manganese toxicity and tolerance of plants IV. Effects of silicon on alleviation of manganese toxicity of rice plants. *Soil Sci. Plant Nutr.*, **34**: 65-73.
- Huber, JL, Huber, SC, Mc Michael, RW Jr, Redinbaugh, MG, Campbell, WH (1993). Modulation of nitrate reductase by protein phosphorylation. *Curr Top Plant Biochem Physiol.*, **12**: 7-8.
- Hoisington, D., Khairallah, M., Reeves, T., Ribout, J. M., Skovmand, B., Taba, S., and Warburton, M. (1999). Plant genetic resources. What can they contribute towards increased crop productivity? *Proceedings of National Academy of Sciences*, **96** (11): 5937-5943.

-
- Ivanova, T. M., Davydova, M. A. and Tubin, B. A. (1967). On catalytic functions of peroxidase *Blokimiya*, **32**: 607- 611.
- Jain, A. and Srivastava, H.S. (1981). Effect of salicylic acid on nitrate reductase activity in maize seedlings. *Physiol. Plant*, **51**: 339-342.
- Jain, V. and Abrol, Y. P. (2005). Regulation of Nitrate reductase Activity by phytohormones in Wheat. *J. Plant Biol.*, **32** (1): 43-48.
- Jain, V., Rajam, M.V., Kumar, P.A. and Abrol, Y.P. (1997). Modulation of nitrate reductase activity by polyamines in leaves of wheat seedlings. *Indian J. Expt. Biol.*, **35**: 1121-1124.
- Jaleel, V.A., Kamaravelu. G., and Ramanujam, M.P. (1998), Responses of *Vinga mungo* L. Hepper plants to presoaking treatment of seed with salicylic acid on nodulation. Nitrogen fractions and related anzyme activites. *Nat. Seminar on role of plant physiol and Biotech. In Agricultural and Industry, Osmania University, Hydrabad.*
- James, C. (1997). ISAAA briefs No. 4 (International Service for acquisition of agrobiotech application, Ithaca, NY) pp 31.
- James, WO, Beevers, H. (1950). The respiration of *Arum spadix*. A rapid respiration, resistant to cyanide. *New Phytol*, **49**: 353-374.
- Janda, T. G., Szalai, A., Horvath, Z. E. and Paldi, E. (2000). Effect of benzoic acid and aspirin on chilling tolerance and photosynthesis in young maize plants. *Plant Mol. Biol.*, **26**: 1439-1458.
- Janda, T., Szalai, G., Tari, I. and Paldi, E. (1999). Hydroponic treatment with salicylic acid decreases the effects of chilling injury in maize (*Zea mays* L.) plants. *Planta*, **208**: 175-180.
- Janda, T., G., Szalai, A., Hovrath, Z. E. and Paldi, E. (2000). Effect of benzoic acid and aspirin on chilling tolerance and photosynthesis in young maize plants. *Maydica*, **45**: 29-33.
- Jaworski, E.G. (1971). Nitrate reductase assay in intact plant tissues. *Biochem. Biophys. Res. Commun.*, **43**: 1274-1279.
- Jiang, Y. and Huang, B. (2001). Effect of calcium on antioxidant activities and water relations associated with heat tolerance in two cool-seasoned grasses. *J. Exp. Bot.*, **52**: 341-349.
- Kaiser, WM, Huber, He (1994). Modulation of nitrate reductase *in vivo* and *in vitro* : Effects of phosphoprotein phosphates inhibitors, free Mg^{2+} and 5 AMP. *Planta*, **193**: 358-364.
- Kalarani, M. K., Sivakumar, R., Thangaraj, M., Vanagamudi, M. and Srinivasan, P. S. (2002b). Effect of foliar application of growth regulators on biochemical attributes and grain yield in pearl millet. *Indian- Journal of Plant Physiology*, **7** (1): 79-82.
-

-
- Kalarani, M. K., Thangaraj, M., Sivakumar, R. and Mallika, V. (2002a). Effects of salicylic acid on tomato. (*Lycopersicon esculentum* Mill) productivity. *Crop-Research (Hisar)*, **23** (3): 486-492.
- Kang, G. Z., Wang, C. H., Sun, G. C. and Wang, Z. X. (2003 a). Salicylic acid changes activities of H₂O₂ metabolizing enzymes and increases the chilling tolerance of banana seedlings. *Envir. Exp. Bot.*, **50**: 9-15.
- Kang, G. Z., Wang, Z. X. and Sun, G. C. (2003 b). Participation of H₂O₂ in enhancement of cold chilling by salicylic acid in banana seedling. *Acta Bot. Sin.*, **45**(5): 567-573.
- Kang, G.A., Wang, Z.Y., Xia, K.F., Sun, G.C. (2007). Protection of ultrastructure in chilling-stressed banana leaves by salicylic acid. *Journal of-Zhejiang-University-Science-B.*, **8** (4): 277-282.
- Kang, H.M. and Saltveit, E.M.E. (2002). Activity of enzymatic antioxidant defense systems in chilled and heat shocked cucumber seedings radicals. *Physiol. Plant.*, **113**: 548-556.
- Kapulnik, Y., Yalapani, N. and Raskin, I (1992). Salicylic acid induces Cyanide-Resistant Respiration in Tobacco cell-suspension cultures. *Plant Physiology*, **100**: 1921-1926.
- Kaur, M. (1987). Effects of some phenols on nitrogen metabolism in two peanut (*Arachis hypogae* L.) varieties Ph. D. Thesis, PAU, Ludhiana.
- Kedage, V. V. (2008). *In vitro* studies of *Vitis vinifera*. Ph.D. Thesis submitted to Shivaji University, Kolhapur.
- Khalil, I., Al-Mughrabi (2008). SA induces Resistance to Potatoes Against *Rhizoctonia solani*, the cause of Back Scurf and stem canker, *International Journal of Biological Chemistry.*, **2** (1): 14-25.
- Khan, W., Balakrishnan, P., Donald, S. (2003). Photosynthetic responses of corn and soybean to foliar application of salicylates. *Journal- of - Plant- Physiology* **160** (5):485-492.
- Kharana, J.P., and Cleland (1992). Role of salicylic acid and benzoic acid in flowering of a photoperiod-insensitive strain of *Lemna Paucicostata* LP 6. *Plant Physiol.*, **100**: 1541-1546.
- Khodary, S.E.A. (2004). Effect of salicylic acid on the Growth, Photosynthesis and Carbohydrate Metabolism in salt stressed Maize plants. *International Journal of Agriculture and Biology.* **6** (1): 5-8.
- Khodary, S.E.A. (2004). Effect of salicylic acid on the Growth, photosynthesis and carbohydrate Metabolism in salt stressed Maize plants. *International Journal of Agriculture and Biology.* **6** (1): 5-8.
- Khurana, J.P., Maheshwari, S.C. (1980). Some effects of salicylic acid on growth and flowering and in *Spirodela polyrhiza* SP 20. *Plant cell Physiol.*, **21**: 922-27.
-

-
- Kim, HS. Lim, CJ., Han, TJ., Kim, JC, Jin, CD (2003). Effects of salicylic acid on paraquat tolerance in *Arabidopsis thaliana* plants. *Journal of Plant Biology*. **46** (1): 31-37.
- Kirk, JOT and Allen, R.L. (1965). Dependence of chloroplast pigment on Actiodione. *Arch. Biochem., Biophys. Viommun.*, **21**: 523-530.
- Klessing, DF, Malamy, J. (1994). The salicylic acid signal in plants. *Plant Mol Biol.*, **26**: 1439-1458.
- Klessing, D.F.J., Durner, J., Shah, Y., Yang (1998). Phytochemical signals and plant Microbe Interactions, ed. Romeo et al. Ch. 7. Phenum Press, NY. pp 119-137.
- Klessing, DF, Chen, Z, (1991). Identification of a soluble SA-binding protein that may function in signal transduction in the plant disease resistance response. *Proc. Natl. Acad Sci. USA.*, **88** (18): 8179-83.
- Kollatukudy, P. E. Podila, G. K. and Mohan R. (1989). Molecular basis of the early events in plant – fungus interaction. *Genome*, **31**: 342-349.
- Kondo, K. and Morita, Y. (1951). Studies on phyto-peroxidase (1) on the isolation of phyto-peroxidase. *Bull. Res. Inst. Food Sci., Kyoto Univ.*, **4**: 12-23.
- Kremer M. L. (1970) peroxidatic activity of catalase *Biochem Biophys Acts*. **198**: 119-209.
- Ku, H. S., Yang, S. F. and Pratt, H. K. (1970). Ethylene production and peroxidase activity during tomato fruit ripening. *Plant Cell Physiol.*, (Tokyo). **11**: 241-246.
- Kumar, D and Klessing, D.F. (2003). Reports on proceedings of the National Academy of science (PNAS).
- Kumar, P. and Mani V.P. (1999). Effect of Salicylic acid on growth, development and some biochemical aspects of soyabean (*Glycine max* L.). *Indian Journal of Plant Physiol.*, **4** (4): 327-330.
- Kumar, P., Dube, S. D. and Chauhan, V. S. (1999). Effect of SA on growth, development and some biochemical aspects of soyabean (*Glycine max* L. Merrill). *Indian Journal of Plant Physiology*, **4** (4): 327-330.
- Kumar, P., Dube, S.D. and Chautian, V.S. (1998). Responces of soyabean (*Glycine max* L. Merrill) to foliar application of salicylic acid. *National seminar on plant physiology and Biotechnology In Agriculture and Industry, Osmania University, Hydrabad*.
- Kutwal, D.N. (1989). Influence of chloro choline chloride (CCC) pretreatment on physiology of groundnut (*Arachis hypogaea* L.) M. Phil. Thesis submitted to Shivaji University, Kolhapur, India.
- Lamark, J.B. (1978). In *Flore Francaise* 3 pp. 553-39, Paris: L Emprimerie Royale.
-

-
- Larkindale, J. and Huang B. (2004). Thermotolerance and antioxidant systems in *Agrostis stolonifera*: Involvement of salicylic acid, abscisic acid, calcium, hydrogen peroxide and ethylene. *Journal of Plant Physiology*, **161**(4): 405-413.
- Larkindale, J. and Knight, M.R. (2002). Protection against heat stress-induced oxidative damage in *Arabidopsis* involves calcium, abscisic acid, ethylene and salicylic acid. *Plant Physiology*, **128**: 682-695.
- Larque- Saavedra, A. and Martin-Mex, R. (2007). Effects of salicylic acid on the Bioproductivity of plants. *Springer*, pp. 15-23.
- Larque-Saavedra, A. (1978). The antitranspirant effect of acetylsalicylic acid on *Phaseolus vulgaris*. *Physiol Plant*, **43**: 126-8.
- Larque-Saavedra, A. (1979). Stomatal closure in response to acetyl-salicylic acid treatment. *Z. Pflanzenphysiol.*, **93**: 371-5.
- Le, T. T. and Skoog, F. (1965) Effect of substituted phenols on bud formation and growth of tobacco tissue culture. *Physiol Plant*, **18**: 386 -402
- Leon, J., Yalapani, N., Raskin, I. and Lawton, M. (1993). Induction of benzoic acid 2-hydroxylase in virus inoculated tobacco. *Plant Physiol*, **103**: 323 -328.
- Leon, J., Lawton, M. A. and Raskin, I (1995). Hydrogen peroxide stimulates salicylic acid biosynthesis in tobacco. *Plant Physiol.*, **108**: 1673-1678.
- Lesile, C. A. and Romani, R. J. (1988). Inhibition of ethylene biosynthesis by salicylic acid. *Plant Physiol.*, **88**: 833-837.
- Lesile, C.A., Romani, R.J. (1986). Salicylic acid: a new inhibitor of ethylene biosynthesis. *Plant Cell Rep.*, **5**: 144-46.
- Li, Z. L., Yuan, Y. B., Liu, CL and Cao, Z. X. (1998). Regulation of antioxidant enzymes by salicylic acid in cucumber leaves. *Acta Bot. Sin.*, **40**(4): 356-361.
- Lillo, C, Smith, L.H., Nimmo, H.G. and Wilkins, M.B. (1996). Regulation of nitrate reductase and phosphoenolpyruvate Carboxylase activities in barley leaf protoplasts. *Planta*, **200**: 181-185.
- Lillo, C., Kazazaic, S., Ruff, P. and Meyer, C. (1997). Characterization of nitrate reductase from light and dark exposed leaves-comparison of different species and effects of 14-3-3 inhibitor proteins. *Plant Physiol*, **114**: 1377-1383.
- Lindhauer, M.G. (1989). The role of K⁺ in cell extension, growth and storage of assimilates. In: Proceedings of 21st International potash Institute, Lovain-la-Neure/Belgium, pp. 161-881.
- Lips, H. and Roth-Bejrao, N. (1969). *Science*, 166:109.
- Liu, C., Zhan, J., Yuang-Yong, B., Cuibin-Yu and Yu- Long, F. (1999). Effects of salicylic acid on the photosynthesis of apple leaves. *Acta Hort. Sinica.*, **26**: 261-262.
-

-
- Liu, HT, Huang, WD, Pan, QH, Weng, FH, Zhang, JC, Liu, YY. (2006a). Contributions of PIP₂ - specific phospholipase C and free salicylic acid to heat acclimation-induced thermotolerance in pea leaves. *Journal of Plant Physiology*, 163: 405-416.
- Liu, HT; Liu, YY, Pan, QH, Yang, HR, Zhang, JC, Huang, WD (2006 b). Novel inter-relationship between salicylic acid, abscisic acid and PIP₂-specific phospholipase C in heat acclimation-induced thermo tolerance in Pea leaves. *Journal of Experimental Botany*, 57 (12): 3337-3347.
- ✕ Liu, W., Song, S., Guo, S., Shang, and Zhang Z. (2006). Salt resistance and its mechanism of cucumber under effects of exogenous chemical activators.
- Lopez – Molina, D., Heering, H. A., Smulevich, G., Tudela, J., Thorneley, R. N. F. Garcia – Canovas, F. and Rodriguez Lopez, J. N. (2003). Plant Peroxidases Biochemistry and Physiology. VI International plant peroxidase symposium proceedings. (Eds. Acosta, M., Rodrigure, Lopz. J. N. and Pedreno M. A.). *Muracia, Spain*, pp– 108.
- Lopez, A.M.Q., Lucas, J.A. (2002). Effects of plant defence activators on anthracnose disease of cashew. *European-Journal of Plant Pathology*, 108 (5): 409-420.
- Lowry, O.H., Rosenbrough, N. J., Frr, A.L. and Randall, R.J. (1951). Protein measurement with folin phenol reagent. *J. Biol. Chem.*, 193: 262 – 263.
- Lu, J., Ertl, J.R. and Chen, C. (1990). Cytokinin enhancement of light induction of nitrate reductase transcript levels in etiolated barley leaves. *Plant Mol Biol.*, 14 : 585-594.
- Lu, J., Ertl, J.R. and Chen, C. (1992a). Transcriptional regulation of nitrate reductase mRNA levels by cytokinins, abscisic acid interactions in etiolated barley leaves. *Plant Physiol.*, 98: 1255-1260.
- Lu, J., Ertl, J.R. and Chen, C. (1992b). Transcriptional regulation of nitrate reeducates activity of Wheat leaves. *Plant Physiol and Biochem*, 22 (2): 119-121.
- Luck, H. (1974). *Methods in enzymatic Analysis 2* (Ed. Bergmeyer) Acad. Press New York, pp 885.
- Ma, D.H., Pang, J.A., Li, S.J. and Juo, Z.R. (1998). Effect of temperature stress acclimation on some physiological characters in leaves of cucumber seedlings. *Acta Hort Sin.*, 25 (4): 350-355.
- Malamy, J. and Klessing, D. F. (1992). Salicylic acid and Plant disease resistance. *Plant J.*, 2: 643-654
- Malewar, G.L. Jadhav, N.S., Budhewar, N.M. (1982). Possible role of Zinc in nodulation and other growth attributes of groundnut. *J. of Maharashtra Agric., Univ*, 7(3): 241-242.
-

-
- Manthe, B., Schulz, M. and Schnabl, H. (1992). Effects of salicylic acid on growth and stomatal movements of *Vicia faba* L.: Evidence for salicylic acid Metabolization. *Journal of Chemical Ecology*, **18** (9): 1525-1539.
- Marschner, H. (1986). Mineral Nutrition of higher plants. Academic Press, New York.
- Marschner, H. (2002). Mineral Nutrition of higher plants (2nd Ed.) Academic Press, London.
- Martin – Mex, R., Villanueva,- Couch, E., Herrerd – Campos,T, and Larque- Saavedra, A. (2005) . Positive effect of Salicylates on the flowering of African violet. *Scientia Horticulturae*, **103** (4): 499 –502.
- Martinez, M. C., Diaz, M., Achkor, H. and Espunya, M. C. (2007). Glutathione dependent formaldehyde dehydrogenase/ GSNO reductase from *Arabidopsis* Expression pattern and functional implications in phytoremediation and pathogenesis. *BMC Plant Biology*, **5** (Suppl 1): S1-S22.
- Mateo, A. (2006). Roles of Lesions simulating disease 1 and salicylic acid in Acclimation of plants to environmental cues. Ph.D. Thesis submitted to Dept. of Botany, Stockholm, University, Sweden.
- Mauch-Mani, B. and Slusarenko, A.J (1996) Production of salicylic acid precursors in a major function of phenylalanine ammonia - lyase in the resistance of *Arabidopsis* to *Peronospora parasitica*. *Plant cell*, **8**: 203 – 212.
- Mazelis, M. and Ingraham, L.L. (1962). The peroxidal phosphate dependent oxidative decarboxylation of methionine by peroxidase. Identification of 3 methyl thiopropioamide as a product of the reaction. *J. Biol. Chem.*, **237**: 109-112.
- Meawly, P., Modlers, W., Buchala, A. and Metraux, JP (1995). Local and systemic biosynthesis of salicylic acid in infected cucumber plants. *Plant Physiol.* **109**: 1107 – 1114.
- Meeuse, BJD, Raskin, I. (1988). Sexual reproduction in the arum lily family, with emphasis on thermogenecity. *Sex Plant Repod*, **1**: 3-15.
- Meteraux, JP; Singer, H., Ryals, J., Word, E., Wyssbenz, M, Gaudin, J, Raschdorf, K. Schmid, E., Blum, W., Inverard, B. (1990). Increase in salicylic acid at onset of systemic acquired resistance in cucumber. *Science*, **250**: 1004-1006.
- Miflin, B.J. and Lea, P.J. (1982). "In Nucleic acid and protein in plants". Eds. Boulter Panthur B. Vol. (14a) pp. *Springer Verlag, Berlin*.
- Mikolajczyk, M., Awotunle, O.S. and Muszynska, G. (2000). Osmotic stress induces rapid activation of a salicylic acid induced protein kinase and a homology of protein kinase. ASK 1 in tobacco cell. *Plant Cell*, **12**: 165-178.
- Mishra, A. and Choudhari, M. A. (2001). Effect of Salicylic acid on heavy metal-induced membrane deterioration mediated by lipoxygenase in rice *Biologia Plantarum*, **42** (3) : 409- 415.
-

-
- Mishra, A. and Choudhari, M.A. (1999). Effect of salicylic acid on heavy metal-induced membrane deterioration mediated by lipoxygenase in rice. *Biol. Plant.*, **42**: 409-415.
- Mishra, S.N., Mishra, M. and Sharma, I (1995). Response of mustard leaf nitrate reductase activity, total nitrogen and protein content to polyamines under saline conditions. *Physiol. And Mol. Biol. of Plants.*, **1** (1): 195-197.
- Moharikar, S. T. (2001). Physiological studies in seed germination of Moong and wheat under the influence of salicylic acid. M. Phill. Thesis submitted to Shivaji University, Kolhapur.
- Molina, A., Bueno, P., Marin, Mc, Rodriguez-Rosales, M.P., Belver, A., Venema, K., Donaie, JP (2002). Involvement of endogenous salicylic acid content, Lipoxygenase and antioxidant enzyme activities in the response of tomato cell suspension culture to NaCl. *New Phytol.*, **156**: 409-415.
- More, M.N., Bharud, R. W., Mate, S.N. and Wagh, R.S. (2007). Effect of foliar application of plant growth regulators and micronutrients on the yield and contributing characters of summer groundnut. National seminar on plant physiology, Dr. B.S. Kokan Krishi Vidyapeeth, Dapoli. pp. 125.
- Mori, I. C., Pinontoana, R., Kawano, T., and Muto, S. (2001). Involvement of superoxide generation in salicylic acid-induced stomatal closure in *Vicia faba*. *Plant Cell Physiol.*, **42**:1383-88.
- Mori, I.C., Pinontoana, R., Kawano, T., and Muto, S. (2001). Involvement of superoxide generation in salicylic acid-induced stomatal closure in *Vicia faba*. *Plant Cell Physiol.*, **42**:1383-88.
- Morilla, C.A., Boyer, J.S. and Hageman, R.H. (1993) Nitrate reductase activity and polyribosomal content of corn (*Zea mays* L.) having low water potential. *Plant Physiol.*, **51**:817-824.
- Moussa, B.I.M. (2000). Effect of nitrogen source, rate and magnesium on yield, oil, protein content and mineral nutrition of peanut. *Egyptian Journal of Soil Science*, **40** (4): 495-511.
- Naik, R.W., Deotale, R.D., Chore, C.N., Titare, P. and Balachandran, S. (2005). Effect of hormone and nutrients on chemical, biochemical and quality aspects of groundnut (*Arachis hypogaea* L). *Advances-in-Plant-Sciences*, **18** (2): 901-906.
- Nanda, K.K., Kumar, S., Sood, V. (1976). Effect of gibberellic acid and some phenols on flowering of *Impatiens balsamina*, a qualitative short-day plant. *Physiol. Plant*, **38**: 53-56.
- Nandi, B., Suku, N.C., Banerjee, N., Banu, S. Sinha, P. (2000). Salicylic acid reduces *Meloidogyne incognita* infestation of cowpea. *Proceedings-of-the Zoological society (Calcutta)*. **53** (2): 93-95.
-

-
- Naylor, M., Murphy, A.M., Berry, J. O. and Carr. J. P. (1998). Salicylic acid can induce resistance to plant virus movement. *Molecular Plant Microbe Interactions*, **11** (9): 860-868.
- Nayyar, H. (2003). Calcium as environmental sensor in plant. *Curr. Sci.*, **84**: 893-902.
- Neill, S. T. Desikan P, Clarke A., Hurst R. D. and Hancock J. F. (2002) Hydrogen peroxide and nitric oxide as signalling molecules in plants. *Jr. of Expt. Bot.*, **53**: 1237-1247.
- Nelson, N. (1944). A photometric adaptation of somogi method for the determination of glucose. *J.Biol.Chem.*, **153**: 375-380.
- Neuenschwander, U., Vernooji, B., Friedrich, L., Uknes, S., Kessmann, H., and Ryals, J. (1995). Is hydrogen peroxide a second messenger of salicylic acid in systemic acquired resistance. *Plant J.*, **8**: 227-233.
- Noctor, G. and Foyer, C. H. (1998). Ascorbate and glutathione keeping active oxygen under control. *Ann. Rev. Plant Physiol Plant Mol Biol.*, **49**: 249-279.
- NRCG,(1994). Annual report 1993-94. National Research centre for groundnut (ICAR) Jugnagad.
- O' Neal, D. and Joy, K.W., (1974). Glutamine synthetase of pea leaves, divalent action effects, substrate especially and other properties. *Plant Physiol.*, **54**: 775-779.
- O' Hara ,G.W., Dilworte, Boonkerd, N. and Parkpian, P. (1988). Iron deficiency specially limits nodule development in peanut inoculated with *Bradyrhizobium* Sp. *New Phytol.*, **108**: 51-57.
- Ogawa,D., Nakajima, N., santo, T., Tamaoki, M., Anona, M., kubo, A., kamada, H. and Saji, H. (2005). Rewgulation of salicylic acid synthesis in ozone-exposed tobacco and *Arabidopsis*. *Phyton*, **45** (4): 169-75.
- Ohashi, Y. and Matsuoka, M. (1987). Induction and secretion of pathogenesis - related proteins by salicylate or plant hormones in tobacco suspension cultures. *Plant Cell Physiol.*, **28**: 573-580.
- Ohashi, Y. and Ohshima, M. (1992). Stress-induced of genes for pathogenesis – related proteins in plants. *Plant Cell Physiol.*, **33**: 819-826.
- Oota, Y. (1975). Short-day flowering of *Lemna gibba* G3 induced by salicylic acid. *Plant cell Physiol.*, **16**: 1131-35.
- Ortiz, A., Mortinez, V. and Cerada, A. (1994). Effects of osmotic shock and calcium on growth and solute composition of *Phaseolus vulgaris* plants. *Physiol. Plant*, **91**: 468-476.
- Pahllich, E., Joy, KW. (1971). Glutamate dehydrogenase from pea roots: purification and properties of the enzyme. *Can J Biochem.*, **49**: 127-138.
-

-
- Pal, R.N., Raj, V.K. and Laloraya, M.M. (1973). Calcium in relation to nitrogen metabolism II changes in free amino acid in peanut plants. *Biochem. Physiol. Pflanz.*, **164** (4): 547-565.
- Pancheva, T. V., Popova L. P. and Uzunovo, A. N. (1996). Effects of salicylic acid on growth and photosynthesis in barley plants. *J. Plant Physiol.*, **149**: 57-63.
- Pancheva, T.V., Popova, L.P. (1998). Effect of salicylic acid on the synthesis of ribulose 1,5-bisphosphate carboxylase/oxygenase in barley leaves. *Plant Physiol.*, **152**: 381-386.
- Pathmanabhan, G. and Thangaraj, M. (1999). Studies on yield maximization in soyabean with chemicals, PGRS. *National Symposium on Plant Physiology, Annaimali*.
- Patil, S.M. (1993). Effect of 'Aspirin' on summer groundnut. *PKV Research Journal*, **17** (1): 117-118.
- Pena-Cortes, H., Fasahn, J. and Willmitzer, L. (1995) Signals involved in wound-induced proteinase inhibitor II gene expression in tomato and potato plants. *Proc. Natl. Acad. Sci. USA*, **92**: 4106-4113.
- Peng, J., Deng, X., Huang, J., Jia, S., Miao, X. and Huang, Y. (2004). Role of salicylic acid in Tomato defence against cotton Bollworm, *Helicoverpa armigera* Hubner. *Z. Naturforsch.*, **59**: 856-862.
- Peoples, T.R. and Koch, D.W. (1979). Role of potassium in carbon dioxide assimilation in *Medicago sativa* L. *Plant Physiol.*, **63**: 878-881.
- Pfleger, R. and Mengel, K. (1972). Dis photochemische activated von chlorplasten ausunters chedlich mit kalim ernahrten pflunren. *Plant Soil*, **36**: 417-425.
- Philippe, M., Molders, W., Buchala, A. and Metraux, J.P. (1995). Local and systemic biosynthesis of salicylic acid in infected cucumber leaves. *Plant Physiol. Rockville*. **109** (3): 1107-1114.
- Pike, CS, Cohen, WS and Monrae, JD (2002) Nitrate reductase. A novel system for investigation of enzyme induction in eukaryotes, *Biochem Mol Biol.*, **36**: 111-116.
- Price, C.A. and Thimann, K.V. (1954). Dehydrogenase activity and respiration: a quantitative comparision. *Plant Physiol.*, **29**: 495.
- Purohit, A. and Gehlot, H.S. (2001). Role of exogenously applied salicylic acid on growth and activity of superoxide dismutase, lipid peroxidation and other metabolism in *Sesamum indicum* (Cv. RT-46 and RT-54). National Seminar on Role of Plant Physiology for sustaining quality and quantity of food production in relation to environment, Dharwad University, pp. 69.
- RAA J. (1973) : Cytochemical Localization of Peroxidase in plant cell. *Physiol Plant*, **28**: 132 – 133.
-

- Radwan, D. E. M., Fayez, K. A., Mahmoud, S. Y., Hamad, H. and Lu, G. (2007). Physiological and metabolic changes of *Cucurbita pepo* leaves in response to zucchini yellow mosaic virus (ZYMV) infection and Salicylic acid treatments. *Plant Physiology and Biochemistry*, **45** (6-7): 480-489.
- Rai, V.K, Sharma, S.S., Sharma, S. (1986). Reversal of ABA-induced stomatal closure by phenolic compounds. *J. Expt. Bot.*, **37**:129-134.
- Rajasekarn, LR and Balke, TJ (1999). New plant Growth Regulators protect photosynthesis and enhance growth under drought of jack pine seedlings. *J. Plant Growth Reg.*, **18**: 175-181.
- Rajjou, L., Belghazi, M., Huguet. R., Robin, C., Moreau, A., Job, C. and Job D. (2006). Proteomic investigation of the effect of salicylic acid on Arabidopsis seed germination and Establishment of early defense mechanism. *Plant Physiol.*, **141**: 910-923.
- Ramanujam, M.P., Jaleel, V.A. and kumaravelu, G. (1998). Effect of salicylic acid on nodulation, nitrogenous compounds and related compounds and related enzymes of *Vigna mungo*. *Biol. Plant.*, **41** (2): 307-311.
- Rane, M. R. (1987). Physiological studies of leaf senescence in groundnut (*Arachis hypogaea* L.) M. Phil thesis submitted to Shivaji University, Kolhapur (India).
- Rane, J. Kawna, C.L., Kumar, P. A. and Abrol, Y. P. (1995). Salicylic acid protects nitrate reductase activity of wheat leaves. *Plant Physiol and Biochem*, **22** (2): 119-121.
- Rao, G. H., Narayanan, A. and Subbarao, G. (1998). Effect of foliar spray of salicylic acid on growth and development of black gram, *Vigna mungo* (L) Hepper and green gram, *Vigna radiata* (L) Wizek. *Natl seminar on Role of Plant Physiol and Biotech In Agricultural and Industry*.
- Rao, MV and Davis, KR (1999). Ozone induced cell death occurs via two distinct mechanisms in *Arabidopsis*: the role of salicylic acid. *Plant J.*, **17**: 603-614.
- Raskin, I. (1992a). Salicylate, A New Plant Hormone. *Plant Physiol.*, **99**: 799-803.
- Raskin, I. (1992b). Role of salicylic acid in plants. *Annu. Rev. Plant Physiol. Plant Mol. Biol.*, **43**: 439-463.
- Raskin, I., Skubatz, H., Tang, W., Meeuse, BJD (1990). Salicylic acid levels in thermogenic and non thermogenic plants. *Ann. Bot.*, **66**: 376-373.
- Raskin, I., Turner, IM, Melander, WR (1989). Regulation of heat production in the inflorescence of an Arum lily by endogenous salicylic acid. *Proc Natl. Acad Sci.*, **86**: 2214-2218.
- Rasmussen, J.B., Hummerschmidt R., and Zook, M.N, (1991) Systemic induction of salicylic acid accumulation in cucumber after inoculation with *Pseudomonas syringae* Pv. *syringae*. *Plant Physiol.*, **97**: 1342-1347.
- Ryals, J. A., Neuenschwander, U. H., Willits, M. G., Molina, A., Steiner, H.- Y. and Hunt M. D. (1996). Systemic acquired resistance, *Plant Cell*, **8**: 1809-1819.

-
- Rathore, S. (1995). Physiological and Biochemical effects of mono, di, and polyphenolic compounds on groundnut. *Journal of plant Biochemistry and Biotechnology*, **4** (2): 125-126.
- Reddy, K.J. and K.V.N. Rao (1979). Effect of Zinc on growth and metabolism of two varieties of *Cicer arietinum*, *Indian J. Plant Physiol.*, **22**: 254-261.
- Reddy, P.R., Rao, L.M. and Subba Rao, I.V. (1981). Nitrogen nutrition in groundnut (*Arachis hypogaea* L.) *Indian J. Expt. Biology*, **19** : 966 – 970.
- Reid, P.H. and Cox, F.R., (1973) 'Soil properties, mineral nutrition and fertilizer practices chapter-B, in peanuts culture and uses'. American peanut Research and Education Association Inc., still water, Dkishoma.
- Rendon, S.L.A. (1983). Control hormonal de la abscisin de organos reproductivos en *Phaseolus vulgaris* L. Cv. Cacahuete 72. Tesis de Maestria en ciencias, C.P. Chapingo, Mexico.
- Repka, V.A. (1996). Virus-inducible cucumber anionic peroxidase has a serological counterpart indifferent plant species. *Acta Vir*, **40**: 121-125.
- Rhoads, DM, McIntosh, L. (1991). Isolation and characterization of cDNA clone encoding an alternative oxidase protein of *Sauromatum guttatum* (schott). *Proc Natl. Acad sci., USA*, **88**: 2122-2126.
- Ribnicky, D. Shalaev, V. and Raskin, I (1998). Intermediates of Salicylic acid biosynthesis in tobacco. *Plant Physiology Rockvile*, **188**(2): 565 – 572.
- Ros Barcelo, A., Pedreno, M. A., Munoz, R. and Sabater, F. (1989). Physiological Significance of the binding of acidic isoperoxidases to cell walls. *Physiol. Plant*, **73**: 238 – 244.
- Ross, A.F. (1961a). Localized acquired resistance to plant virus infection in hypersensitive hosts. *Virology*, **14**:329-339.
- Ross, A.F. (1961b). Systemic acquired resistance induced by localized virus infections in plants. *Virology*, **14**:340-358.
- Ryals, J. A., Uknes, S.J. and Ward, E.R. (1994). Systemic acquired resistance. *Plant Physiol.*, **104**: 1109-1112.
- Sadasivam, M. and Manikam (1992). Biochemical methods for Agricultural Science. Pb. Wiley Eastern Ltd., New Delhi, pp. 37.
- Sahel, A.A.H. Abdel-Kader, D.Z. and El Elish, A.M. (2007). Role of heat shock and salicylic acid in Antioxidant Homeostasis in Mungbean (*Vigna radiata* L.) plant subjected to Heat stress. *American Journal of Plant Physiology*, **2** (6): 344-355.
- Sakhabutdinova, A. R., Fathutdinova, D. R., Bezrukova, M. V. and Shakirova, F. M., (2003). Salicylic acid prevents damaging action of stress factors on wheat plants. *Bulg. J. Plant Physiol.*, 214-219 (Special issue).
-

-
- Sandmann, G. and Boger, p. (1983). The enzymological function of heavy metals and their role in electron transfer process of plants. In "Encyclopaedia of plant physiology, New Series," (Eds.) A. Lauchli and R. Bielecki, vol. 15 A, pp 563-596. *Springer-verlog*, Berlin and New York
- Sankala, N. And Huber, W. (1975). *Z Pflanze Physiol.*, **75**: 392.
- Sano, H., Seo, S., Koizumi, N., Niki, T., Iwamura H and ohashi. Y. (1996). Regulation by cytokinins of Endogenous levels of Jasmonic acid and Salicylic acids in mechanically wounded Tobacco plants. *Inroad*'
- Scan- dalios, J. G. (1993) oxygen stress and superoxide dismutase. *Plant Physiol.*, **101**: 7-12.
- Scharfetter, E., Rottenburg, T., Kandeler, R. (1978). The effect of EDHA and Salicylic acid on flowering and vegetative development in *Spirodela punctata*. *Z. Pflanzenphysiol*, **87**: 445-54.
- Schied, H.W., Ehmke, A., and Hortman, T. (1980). *Z. Naturforsch*, **35**: 213.
- Schuller, D. J. Ban, N., Van Huystee, R. B., Mc Pherson A., Poulas ,T. (1996). The crystal functions of peanut peroxidase. *Structure*, **4**: 311 – 321.
- Scott, I. M., Clarke, S.M., wood, J. E. and Mur, L.A.J. (2004). Salicylate accumulation inhibits growth at chilling temperature in *Arabidopsis*. *Plant Physiology*, **135**: 1040-1049.
- Sekine, T., Sesakawa, T., Morita, S., Kimaro, T. and Kuratomi, K. (1965). cf. Laboratory manual for physiological studies in rice. Eds. Yoshido, S., Forno, D., Cooke, J.B. and Gomez, K.A. Publ. International Rice Research Institute, Manila, 1972.
- Senaratna, T, Merrit, D., Dixon, K., Bunn, E., Touchell, D, Sivasithamparam, K. (2003). Benzoic acid may act as the functional group in salicylic acid and derivatives in the induction of multiple stress tolerance in plants. *Plant Growth Regul.*, **39** : 77-81.
- Senaratna, T., Merritt, D., Dixon, K., Bunn, E., Touchell, D. and Sivasithamparam, K. (2002). Benzoic acid may acts the functional group on salicylic acid and derivatives in the induction of multiple stress tolerance in plants. *Plant Growth Regulation*, **39**: 77-81.
- Senaratna, T., Touchell, D, Bunn, E., Dixon, K. (1998). Method for inducing stress tolerance in plant material Australia.
- Senaratna, T., Touchell, D., Bunn, E., Dixon, K. (2000). Acetyl Salicylic acid (aspirin) and salicylic acid induce multiple stress tolerance in bean and tomato plants. *Plant Growth Regul.*, **30** : 157-161.
- Sengupta, U.K. and Sharma, A. (1986): Effect of ABA and kinetin on glutamate dehydrogenase and glutamate oxaloacetate transaminase activity in germinating groundnut seeds: *Indian J. of Plant Physiol.*, **29** (3): 243-249.
-

-
- Shakirova, F. M., Sakhabutdinova, A. R., Bezrukova, M. V., Fathutdinova, R. A. and Fathutdinova, D. R. (2003). Changes in hormonal status of wheat seedlings induced by salicylic acid and salinity. *Plant Sci.*, 31-32.
- Sharma, R. and Lakhvir (1988). Effect of phenolic compounds on some biochemical parameters during seed development in ray (*Brassica juncea* L.). *J. Plant Sci. Res.*, 4: 69-72.
- Shi, Q., Bao, Z., Zhu, Z., Ying, Q. Qian, Q. (2006). Effects of different treatments of salicylic acid on heat tolerance, chlorophyll fluorescence, and antioxidant enzyme activity in seedlings of *Cucumis sativa* L. *Plant Growth Regulation*, 48(2) : 127-135.
- Shim, T. S., Momose, Y., Yamamoto, A., Kim, D. W. and Usuj, K. (2003) Inhibition of catalase activity by oxidative stress and its relationship to salicylic acid accumulation in plants. *Plant Growth Regul.*, 39: 285-292.
- Shinshi, H., Mohnen, D. and Meins, F.Jr. (1987). Regulation of plant pathogenesis-related enzyme: inhibition of chitinase and chitinase mRNA accumulation in cultured tobacco tissues by auxin and cytokinin. *Proc. Natl. Acad. Sci. USA* 84: 89-93.
- Shirasu, K., Nakajima, H., Rajasekhar, K., Dixon, R.A., Lamb, C. (1997). Salicylic acid potentials an against-dependent gain control that amplifies pathogen signals in the activation of defence mechanisms. *Plant cell*, 9: 261-270.
- Shulaev, V., Leon, J. and Raskin, I (1995). Is Salicylic Acid a Translocated signal of Systemic Acquired Resistance in Tobacco? *The Plant Cell*, 7: 1691-1701.
- Siddqui, M.H., Mohammad, F. and Khan, M.N. (2007). Sensitivity analysis of Erucic acid free cultivars of Rapeseed-mustard under nutrient application. *Indian J. Plant Physiol.*, 12 (2): 153-161.
- Siedow, J. N. and Umbach, A.L. (1995). Plant mitochondrial electron transfer and molecular biology. *The Plant Cell*, 7: 821-831.
- Siefermann-Harms, D. (1985). Carotenoids in photosynthesis. Location in photosynthetic membranes and light harvesting function. *Biochem. Biophys. Acta*, 811: 325-355.
- Siegrist, J., Jeblick, W. and Kaus, H. (1994) Defense responses in infected and elicited cucumber (*Cucumis sativus* L.) hypocotyls segments exhibiting acquired resistance. *Plant Physiol.*, 105: 1365-1374.
- Silverman, P., Seskar, M., Kanter, D., Schweizer, P., Metraux, P.J.P, and Raskin I. (1995). Salicylic acid in rice. Biosynthesis, Conjugation and possible role. *Plant Physiol.*, 108: 633-639.
- Singh, A.L. (1994). Micronutrient nutrition and crop productivity in groundnut. In plant productivity under Environment stress, Karan Singh and S.S. Purohit (edt). Agrobotanical publishers, Bikaner, India PP 66-72.
-

-
- Singh, A. and Singh, P.K. (2007). Salicylic acid induced physiological and biochemical changes in cucumber (*Cucumis sativa* L.) under nitrate control. National Seminar on Plant Physiology, Dr. B.S.Kokan Krishi Vidyapeeth, Dapoli, pp. 115.
- Singh, A.L. (1966 b). Micronutrients nutrition of groundnut II. Effects on the concentrations and uptakes of macronutrients. *Oleagineux*. (In communication).
- Singh, A.L. (1996a). Macronutrients requirement of groundnut I. Effect on the growth and dry matter production, chlorophyll, flowering, transpiration and pod yield, *Oleagineux*. (In communication)
- Singh, A.L. (1999). Mineral nutrition of groundnut. In A. Hemantrajan (Ed.). *Advances in Plant Physiology*, Vol II. Pp. 161-200. Scientific Publishers (India), Jodhpur.
- Singh, A.L. (2004). Mineral nutrient requirement, their disorders and remedies in groundnut. In: M.S. Basu and N.B. Singh (Eds.), *Groundnut Research in India*, pp. 137-139. National Research center for Groundnut (ICAR), Junagadh, India.
- Singh, A.L. and Choudhari, V. (2007). Micronutrient Requirement of Groundnut: Effects on uptake of Macronutrients. *Indian Journal of Pl. Physiol.*, **12** (1): 72-77.
- Singh, A.L. and Dyal, D. (1992). Foliar application of iron for recovering groundnut plants form lime induced iron deficiency chlorosis and accompanying losses in yields. *J Plants Nutr*, **15**: 1421 - 1433
- Singh, A.L., Chaudhari, V., Koradia, V., G. and Zala, P. V. (1995). Effect of excess irrigation and iron and sulphur fertilizers on the chlorosis, dry matter production, yield and nutrient uptake by groundnut in calcareous soil. *Agrochimica* **39**: 184-198.
- Singh, A.L., Choudhari, V. and Koradia, V. G. (1991). Foliar nutrition of nitrogen and phosphorus in groundnut : In D.N. Tyagi *et al.* (editords). *Physiological strategies for crop Improvement*. Proceedings of the International conference of Plant Physiology. PP 129-133 B.H.U., Naranasi, India.
- Singh, B. and Usha, K. (2003). Salicylic acid induces physiological and Biochemical changes in wheat seedlings under water stresses. *Plant Growth Regulation*, **39**: 137-141.
- Singh, C., Singh, P. and Singh, R. (1998). *Modern Techniques of Raising Field Crops* (Ed. 1998) Oxford and IBH publication Co. PVT. Ltd.
- Singh, G. and Kaur, M. (1980). Effect of growth regulators on podding and yield of mung bean (*Vigna radiata* L.) Wilezek. *Indian J. Plant Physiol.*, **23**: 366 -70.
- Singh, P., Parmor, V., Malik, C.P., Grewal, M.K. and Batia, D.S. (1991). Effect of four phenolic compounds on yield, yield characteristics and oil production of two peanut (*Arachis hypogaea* L.) cultivars. *Peanut Science*, **18** (1) : 3-5.
-

-
- Sinha, S.K. and Nicholas, J.D. (1981). Nitrate reductase. *In physiology and biochemistry of drought resistance in plants*, eds. L.G. Paleg and D. Aspinall, 145-168. Sydney : Academic press.
- Sinha, S. K., Srivastava, H. S. and Tripathi, R. D. (1993). Influence of some growth regulators and cations on inhibition of chlorophyll biosynthesis by lead in maize. *Bull. Env. Contamin Toxic*, **51**: 241-246.
- Sivakumar, R., Pathmanabhan, G., Kalarani, M.K., Vanangamudi, M. and Srinivasan, P. S. (2002), Effect of foliar application of growth regulators on biochemical attributes and grain yield in pearl millet. *Indian Journal of Plant Physiology*, **2** (2): 138-141.
- Sivakumar, R., Pathmanabhan, G., Kalarani, M.K., Vanangamudi, M. and Srinivasan, P.S. (2002). Effect of foliar application of growth regulators on biochemical attributes and grain yield in pearl millet. *Indian-Journal of plant physiol.*, **7** (1): 79-82.
- Smith, D. L., Prithviraj B., Zhou, Y. and Khan, W. (2001). Salicylic acid and related phenolic compounds for increasing photosynthesis in plants. International search paper, PCT.
- Solomonson, IP, Barber, M. (1990). Assimilatory nitrate reduction functional properties and regulation. *Annu Rev Plant Physiol Plant Mol Biol.*, **41**: 225-253.
- Sood, V. and Nanda, K. K. (1979). Effect of gibberellic acid and monophenols on flowering of *Impatiens balsamina* in relation to the number of inductive and non-inductive photoperiodic cycles. *Physiol. Plant*, **45**: 250-54.
- Srivastava, H.S. (1980): Regulation of nitrate reductase activity in higher plants. *Phytochemistry.*, **19**:725-733.
- Srivastava, MK and Dwivedi UN (2000). Delayed ripening of banana fruit by salicylic acid. *Plant Sci.*, **158**: 87-96.
- Stevens, J. and Senaratna, T. (2006). Salicylic acid induces salinity tolerance in tomato (*Lycopersicon esculentum* Cv. Roma): associated changes in gas exchange, water relation and membrane stabilization. *Plant Growth Regulation*, **49**: 77-83.
- Sticher, L., Mauch- Mani, B., Metraux, J. P. (1997). Systemic acquired resistance. *Annu Rev Phytopathol.*, **35**: 235-270.
- Stinzi, A, Heitz, T., Prasad, V., Wiedemann-Merdinoghi, S., Kaufmann, S., Geoffroy, P., Legrand, M. and Fritig, B. (1993). Plant 'Pathogenesis-related' proteins and their role in defense against pathogens. *Biochimie*, **75**: 687-706.
- Stout, P.R. (1961) Micronutrients in crop vigour. Proc. 9th Ann. Calif. Fertilizer Conf., pp. 21-23.
- Strong, F.M. (1956). *Topics in Microbial Chemistry*. Wiley, New York.
-

- Stuhmann, M. A., Demorest, D. M. (1972). Changes in isoenzymes of host and pathogen following some fungal infections. *Symp. Biol, Hung.*, **13**: 355-365.
- Sudarsanamma, A. and Swamy P.M. (1987). Role of Ca²⁺ on nitrogen metabolism in three groundnut cultivars (*Arachis hypogaea* L.) In: Abstracts National Seminar, 'Physiology and biochemistry of oil seed plants' organized by Deptt. Of Botany, S.V. University, Tiruati (India) pp.7.
- Sudhakar, N., Nagendro, P., El., Mohan, N. and Murugesan, K. (2007). Induction of systemic resistance in *Lycopersicon esculentum* Cv. PKM 1 (tomato) against cucumber mosaic virus by using ozone. *Journal of Virological Methods*, **139** (1): 71-77.
- Sulaiman, S.M.H., and Vijayakumar, M. (2005). Effect of some phenolic compounds on nutrient content of groundnut. *Exotoxicology and Environmental Monitoring*, **15** (2): 123-126.
- Summermatter, K., Sticher, L., and Metraux, J. P. (1995). Systemic responses in *Arabidopsis thaliana* infected and challenged with *Pseudomonas syringae*. *Plant Physiol.*, **108**: 1379-1385.
- Suzuki, K., Eukuda, Y. and Shinshi, H. (1995). Studies on elicitor - Signal transduction leading to differential expression of defense genes in cultured tobacco cells. *Plant Cell Physiol.* **36**: 281-289.
- Szigeti, Z., Racz, I., Lasztity, D. (2001). Paraquat resistance of weeds – the case of *Conyza canadensis* (L) Crong Z. *Naturforsch*, **56c**: 319-328.
- Tanga, X., Daniel, F. (1999). Overexpression of plants to Activates Defence Response and confers Broad Resistance. *Plant Cell*, **11**: 15-30.
- Tasgin, E. O. Atıçlı, L. P., Popova, L. P. (2006). Effects of salicylic acid and cold treatments on protein levels and on the activities of antioxidant enzymes in the apoplast of winter wheat leaves. *Phytochemistry*, **67**: 710-715.
- Thulke, O. and Conrath, U. (1998). Salicylic acid has a dual role in the activation of defense-related genes in parsley. *The Plant Journal*, **14** (1): 35-42.
- Thurman, DA, Palic, C., Laycock, MV (1965). Isoenzymatic nature of L-Glutamic dehydrogenase of higher plants. *Nature* **207**: 193-194.
- Tillberg, J. E. (1970). Effects of abscisic acid, Salicylic acid and Trans-cinnamic acid on phosphate uptake, ATP-level and oxygen evolution in *Scenedesmus*. *Physiologia Plantarum, Scandinavica, Fasc. 3*, pp: 647-653.
- Toth, S.J., Prince, A.L., Wallace, A. and Mikkelsen, D.S. (1948). Rapid quantitative determination of 8 mineral elements in plant tissues by systemic procedure involving use of a flame photometer. *Soil Sci.*, **66**: 456-466.
- Tuna, A. L., Kaya, C., Dikilitas, M., Yokas, I., Burun, B. and Altunlu, H. (2007). Comparative effects of various salicylic acid derivatives on key growth
- Tuzun, S. and Kuc, J. (1985). Movement of a factor in tobacco infected with *Peronospora tabacina* Adam which systematically protects against blue mold. *Physiol. Plant Pathol.* **26**: 321-330.

-
- parameters and some enzyme activities in salinity stressed maize (*Zea mays* L.). *Plants Pak J. Bot.*, **39** (3): 787-798.
- Uzunova, A.N. and Popova, L.P. (2000). Effect of Salicylic acid on leaf anatomy and chloroplast ultrastructure of barley plants. *Photosynthetica*, **38**: 243 – 250.
- Van Herk, AWH (1937). Die Chemischen Vorgänge im *Sauromatum*-kolben III. Mitteilung. *Proc. K Ned Akad Wet*, **40**:709-719.
- Van Loon, L.C. Occurrence and properties of plant pathogenesis - related proteins. In : Datta SK, Muthuk – rishnan S, editors Pathogenesis related proteins in plants. Boca Raton, FL: *CRC Press*; 1999. pp 1-19.
- Van Loon, L.C., Gerristen, Y.A.M. and Ritter, C.E. (1987) Identification, publication and characterization of pathogenesis related proteins from virus-infected Sumsun NN tobacco leaves. *Plant Mol. Biol.* **9**: 593-609.
- Varnooji, B., Friendrich, L., Morse, A., Reist, R., Kolditz Jawhar, R., Ward, E., Uknes, S., Kessman, H, Ryals, J. (1994). SA is not the Trans located signal responsible for inducing SAR but is required in signal transduction. *The Plant Cell*, **6**: 959-969.
- Wagner, AM, Wagner, MJ and Moore, AL (1998). *In- vivo* ubiquinone reduction levels during thermogenesis in Araceae. *Plant Physiol.*, **117**: 1501-1506.
- Wang, J.B. and Li R.Q. (1999). Changes of Ca²⁺ distribution in mesophyll cells of pepper, under heat stress. *Acta. Horticulturae Sinica*, **26**: 57-58.
- Ward, E.R., Uknes, S.J. Williams, S.C., Dincher, S.S., Wiederhold, D.L., Alexander, D.C., Ahl-Goy, P., Metraux, J.P., and Ryals, J.A. (1991). Coordinate gene activity in response to agents that induce systemic acquired resistance. *Plant Cell*, **3**: 1085-1094.
- Ward, E.R., Uknes, S.J. Williams, S.C., Dincher, S.S., Wiederhold, D.L., Alexander, D.C., Ahl-Goy, P., Metraux, J.P., and Ryals, J.A. (1991). Coordinate gene activity in response to agents that induce systemic acquired resistance. *Plant Cell*, **3**: 1085-1094.
- Watanabe, K. and Takimota, A. (1979). Flower inducing effects of benzoic acid and some related compounds in *Lemna paucicostata* 151. *Plant and Cell Physiology*, **20** (4): 847-850.
- Watanabe, K., Fujita, T. and Takimoto, A. (1981). Relationship between structure and flower – inducing activity of Benzoic acid derivatives in *Lemna paucicostata* 151. *Plant Cell and Physiology*, **22**(8): 1469 – 1479.
- Watanabe, M., Itho, Y. JO, Y., Yasuda, K., Kamachi, K and Watanabe, Y. (2007). Redox and translational regulation of glutamate dehydrogenase subunits in *Brassica napus* under wounding stress. *Plant Science*, **172** (6): 1182 – 1192.
- Weimberg, R. (1970). The effect of NaCl on the activity of malate dehydrogenase from pea seeds. *J. Biol. Chem.*, **242**: 3000-3006.
-

-
- Welinder, K. G. (1985). Plant Peroxidases. Their primary, secondary and tertiary structures and the relation to cytochrome peroxidase. *Eur. J. Biochem.*, **151**: 497 – 504.
- Welinder, K. G.(1992).Superfamily of plant fungal and bacterial peroxidases. *Curr.Opin. Struct. Biol.*, **2**: 388 – 392.
- Wendehenne, D., Pugin, A., Klessing, DF., Durner, J.(2002). Nitric oxide: Comparative synthesis and signaling in animal and plant cells. *Trends Plant Sci.*, **6**: 177 – 183.
- White, R.F.(1979). Acetylsalicylic acid (Asprin) induces resistance to tobacco mosaic virus in tobacco. *Virology*, **99**: 410-412.
- Wildermunt, M.C., Dewande, J., Wu, G., Ausubel, A.M. (2001). *Nature* **414**: 562-565.
- Willekens, H., Chamnongpol, S., Davey, M., Schraudner, M., Langebartels, C., Montagu, M.V., Inz'e D and Camp, W.V. (1997). Catalase is sink for H₂O₂ and is indispensable for stress defence in C₃ plants. *The EMBO Journal*, **16**: 4806-4816.
- Winterbroun, C. C. (1981) Production of hydroxyl radicals forms paraquat radicl and H₂O₂. *FE BS Lett.*, **129**: 339-42.
- Wobbe, K.K. and Klessing, D.F. (1996). Salicylic acid an important signal in plants. In Plant Gene Research (Dennis, E.S., Hohn, B., Hohn, T., Meins Jr. F., Schell, J. and Verma, D.P.S., Eds.) Wein/NewYork: *Springer.*, 167-196.
- Yalapani, N. and Raskin, I. (1993). Salicylic acid : A systemic signal in indeced plant disease resistance. *Trends Microbiol.* **1**: 88-92.
- Yalapani, N., Leon, J., Lawton, M. and Raskin, I. (1993). Pathway of Salicylic acid biosynthesis in healthy and virus-inoculated tobacco. *Plant Physiol.*, **103**: 315-321.
- Yuc, SB (1969). Isozymes of glutamate dehydrogenase in plants. *Plant Physiol.*, **44**: 453-457.
- Yusuf, M., Hasan, S.A., Ali, B., Hayat, S., Fariduddin, Q. and Ahmad, A. (2007). Effect of salicylic acid on the salinity induced changes in *Brassica juncea*. National Seminar on plant physiology, Dr. B.S. Kokan Krishi Vidyapeeth, Dapoli, pp. 114.
- Zhang, K.G., Xun, W.Z. and Chou, S.G. (2003). Participation of H₂O₂ in enhancement of cold chilling by salicylic acid in banana seedlings. *Acta Botanica Sinica.*, **45** (5): 567-573.
- Zhang, Z. Shiqing, S., Liu, W., Guo, S., and Shang Q. (2006). Salt resistance and its mechanism of cucumber under effects of exogenous chemical activators. *Yingyong Shengtai Xuebao*, **17**(10): 1877-1876.
-

- Zhao, H. J., Lin, X. W., Shi, H. Z. and Chang S. M. (1995). The regulating effects of phenolic compounds on the physiological characteristics and yield of soyabeans. *Acta Agron Sin.*, **21**: 351-355.
- Zhou, X. M. A.F. Mackeueie, C.A. Madramootoo and D.L.J. Smith, (1999). Effects of some injected plant growth regulators, with or without sucrose, on grain production, biomass and photosynthetic activity of field grown corn plants. *Agro. Crop. Sci.*, **183**: 103-110.
-