

## ***Bibliography***

# BIBLIOGRAPHY

- \* Abd-El-Rahman, A.A., El-Shourbagy, M.N., and El-Monayeri, M.O., 1974, Salinity effects on carbohydrates and ion content in some desert fodder plants. Bull. Fac. Sci. Cairo Univ., 45: 79-96.
- Abdul-Kadir, S.M., and Paulsen, G.M., 1982, Effect of salinity on nitrogen metabolism in wheat. J. Plant Nutr., 5: 1141-1151.
- \* Abdel-Rahman, A.A., El-Shourbagy, M.N., and Ahmed, A.M., 1975, Some effects of periodically increased salinity on two castor bean varieties. Bull. Fac. Sci. Cairo Univ., 45: 47-56.
- Agarwal, S.C., Mehrotra, N.K., and Sinha, B.K., 1964, Influence of exchangeable sodium on the growth and mineral composition of plants. I. paddy and Barley. J. Indian Soc. Soil Sci., 12: 1-23.
- Akbar, M., Yabuno, T., and Nakao, S., 1972, Breeding for saline resistant varieties of rice. I. variability for salt tolerance among some rice varieties. J. Breeding, 22: 1277-1284.
- \* Aleshin, E.P., Molokov, L.G., and Vakovlen, B.V., 1971, Effect of various types of salinity on peroxidase activity in rice seedlings. Agrokhimiya, 11: 100-102.

Anonymous., 1967, Salt tolerance of rice plant, Annual Report, IRRI, pp.33-36.

Anonymous, 1968, Salinity problem in Rice nutrition, Annual Report, IRRI, pp.35-36.

Anonymous, 1972-1982, The world environment, A report by the U.N. Environment Programme.

Arnon, D.I., 1949, Copper enzymes in isolated chloroplasts. Polyphenoloxidase in Beta vulgaris. Plant Physiol., 24: 1-15.

Atkinson, M.R., Findlay, G.P., Hope, A.B., Pitman, M.G., Saddler, H.D.W., and West, K.R., 1967, Salt regulation in the mangroves Rhizophora mucronata. Lam and Aegialitis annulata. Br. Aust. J. Biol. Sci., 20: 589-599

\* Austenfeld., and Fraz-Arnold., 1974, Correlation of substrate salinity and ion concentration in Salicornia europaea.L. with special reference to oxalate. Biochem Physiol. Pflanz., 165: 303-316.

Ayers, A.D., 1953, Germination and emergence of several varieties of barley in salinized soil cultures. Agron.J., 45: 68-71.

\* Azizbekova, Z.S., 1964, Effect of salts on many physiological process in cotton, maize, lucerne grown under  $SO_4-Cl$  salinity. Bot.Inzt.Azer.SSR Trudy, 24: 87-104.

- Balasubramanian, V., and Rao, S., 1977, Physiological basis of salt tolerance in rice. RISO, 26: 291-294.
- Ball, A.R., 1975, A note on the comparative study of free amino acids content between wild salt tolerant rice varieties. Curr.Sci., 44: 194-195.
- Bates, L.S., Waldren, R.P., and Teare, I.D., 1973, Rapid determination of free proline for water-stress studies. Plant and Soil, 39: 205-207.
- Bernfeld, P., 1951, Enzymes of starch degradation and synthesis. In Advances in Enzymology. Ed. Nord, F.F., Interscience Publ., Inc. New York. 12: 379-428.
- Blum, A., and Adelina Ebercon., 1976, Genotypic responses in Sorghum to drought stress.III. Free proline accumulation and drought resistance. Crop.Sci., 16: 428-431.
- \* Boiko, L.A., and Matukhin, G.R., 1964, Enzymic transformation of carbohydrates in the leaves of cereals in relation to their adaptation to soil salinization. Nauch.Dokl. Vyrsh Shr. Biol.Nauki No.2: 154-157.
- Bowling, D.J.F., and Ansari, A.Q., 1971, Evidence for a sodium influx in sunflower roots. Planta, 98: 323-329.
- \* Buchner, A., 1951, Contribution to the effect of chlorine ions on carbohydrate metabolism of four crop plants. Z.Pflernaeher. Dueng. 52: 225-242.

- Calos Torres Bernal, F.T., Bingham, and Oertli, J., 1974,  
Salt tolerance of mexican wheat, II relation to  
variable and length of growing season. Soil Sci.  
Soc.Amer.Proc., 38: 777-780.
- Chopra, P.N., 1975, The Gazetteer of India. Vol.3, pp.332,  
The Ministry of Education and Social Welfare,  
Government of India, India.
- Chopra, S.L., and Kanwar, J.S., 1980, Analytical agricultural  
chemistry. pp.224-227, Kalyani Publishers, Ludhiana,  
New Delhi.
- Chu, T.M., Aspinall, D., and Paleg, L.G., 1976a, Stress  
metabolism.VII. Salinity and proline accumulation  
in barley. Aust.J.Plant Physiol., 3: 219-228.
- Chu, T.M., Aspinall, D., and Paleg, L.G., 1976b, Stress  
metabolism.VIII. Specific ion effects on proline  
accumulation in barley. Aust.J.Plant Physiol., 3:  
503-511.
- Datta, S.K., 1972, A study of salt tolerance of twelve  
varieties of rice. Curr.Sci., 41: 456-457.
- Dawson, C.R., and Magee, R.J., 1955, Ascorbic acid oxidase,  
In Methods in Enzymol., Vol.II, pp.831-835, Eds.,  
Colewick, S.P., and Kaplan, N.O., Academic press,Inc.,  
New York.

- Derderian, M.D., 1961, Determination of calcium and magnesium in plant material with EDTA. Anal.Chem., 33: 1796-1798.
- Desai, A.D., Seshagirirao, T., and Hirekerur, L.R., 1957, Effect of saline water on growth and yield of rice. J.Indian Soc.Soil Sci., 5: 13-16.
- Dhir, R.P., Kolarkar, A.S., and Bhola, S.N., 1975, Use of saline water in agriculture. II Crop growth and response to fertilizer application under saline water use in cultivars field. Ann.Arid.Zone., 14: 277-284.
- Dixit, V.K., and Lal, R.N., 1971, Effect of different salinity levels on the germination and mineral nutrition of paddy variety 'IR-8'. Proc.All India Symp. on soil salinity, 209-211.
- Donald, C.M., and Hamblin, J., 1976, Biological yield and harvest index of cereals as agronomic and plant breeding criteria. Adv.Agron., 28: 361-405.
- Donovan, T.J., and Day, A.D., 1969, Some effects of high salinity on germination and emergence of barley. Agron.J., 61: 236-238.
- Dostanova, R.Kh., 1966, Effect of  $\text{Na}_2\text{SO}_4$  and NaCl on metabolism and plastid pigments in plants. Soviet Plant Physiol., 13: 614-622.

- Dzhanibekova, L.S., 1972, Phosphorolysis and amylolysis of starch in barley seedlings under condition of salinization. Soviet Plant Physiol., 19: 390-395.
- Eckholm, E.P., 1975, The other energy crisis: fire wood. World Watch Institute, Washington, D.C.
- \* Ehrencorn, V.K.R., 1965, Salt tolerance of rice. Bull. Land-proetsta Suriman, 82: 361-368.
- Ehrler, W., 1960, Some effects of salinity on rice. Bot. Gaz., 122: 102-104.
- El-Fouly, M.M., 1972, Activity of acid phosphatase in wheat seedling associated with soil stress conditions. Plant and Soil, 36: 497-500.
- El-Fouly, M.M., and Jung, J., 1970, Changes in enzymic activity in wheat seedling grown under soil stress conditions. Plant Physiol., 46: 23-27.
- El-Gazzar, A., Wallance, A., and Hemaïdan, N., 1965, Sodium distribution in rough lemon and trifoliate orange seedlings. Soil Sci., 99: 387-391.
- \* EL-Saidi, M.T., 1974, Effect of different salinity levels on growth, development and some physiological process of cotton plants. I. Effect of adding salts before sowing. Zacker Pflanzenbu. 138: 331-340.

- \*EL-Shourbagy, M.N., and Missak, N.L., 1975, Effect of growing season and salinity on growth, mineral composition and seed lipid characteristics of some Recinus communis, varieties. Flora (JENA)., 164: 51-72.
- Everardo Aceves, N., Stolzy, L.H., and Meheys, G.R., 1975, Effect of soil osmotic potential produced with two salt species on plant water potential, growth and grain yield of wheat. Plant and Soil., 42: 619-627.
- Farah, M.A., and Anter, I.M., 1978, Salt tolerance of eight varieties of rice. Agric. Res. Rev., 56: 9-15.
- Fiske, C.H., and Subbarow, Y., 1925, The colorimetric determination of phosphorus. J. Biol.Chem., 66: 375-400.
- Flowers, T.J., and Yeo, A.R., 1981, Variability in the resistance of sodium chloride salinity within rice (Oryza sativa L.) Varieties. New Phytol., 88: 363-373.
- \*Freijsen, A.H.J., and Van Dijk, A., 1975, Difference in growth rate and salt tolerance between varieties of Halophyte Centaurium littoral (Turner) Gilmore and their ecological significance. Acta.Bot.Neerl., 24: 7-22.
- Freund, J.E., 1977, Modern elementary statistics. pp.337-355, Prentice Hall of India Private Limited, New Delhi.



- Garcia, M., and Morard, P., 1979, Effect of sodium chloride on the organic acid composition of grain sorghum. Agrochimica, 23: 103-111.
- Gauch, H.G., and Eaton, F.M., 1942, Effect of saline substract on hourly levels of carbohydrate and inorganic constituents of barley plants. Plant Physiol., 17: 347-365.
- George, P.S., and Choukidar, V.V., 1973, Dynamics of the paddy-rice system in India. CMA Monograph No.42, Centre for Management in Agriculture, Indian Institute of Management, Ahmedabad, India.
- Ghose, R.L.M., Ghatge, M.B., and Subrahmanyam, V., 1959, Rice in India. pp.3, ICAR, New Delhi.
- Giriraj, K., Parashivamurthy, A.S., and Janardhan, K.V., 1976, Comparative study of growth and yield and nutrition in rice as affected by saline water application. SABRO J., 8: 47-52.
- Gill, K.S., and Dutt, S.K., 1979, Tolerance of rice varieties at the germination stage to salt level in the tidal water of the sunderban region. Indian J.Agric. Sci., 49: 374-377.

- Greenway, H., 1962a, Plant response to saline substrates,  
I growth and ion uptake of several varieties of  
Hordeum during and after sodium chloride treatment.  
Aust.J. Biol. Sci., 15: 16-38.
- Greenway, H., 1962b, Plant response to saline substrates,  
II Chloride, sodium and potassium uptake and trans-  
location in young plants of Hordeum vulgare, during  
and after a short sodium chloride treatment.  
Aust.J.Biol.Sci., 15: 39-57.
- Greenway, H., 1965, Plant responses to saline substrates,  
VII Growth and ion uptake through plant development  
in two varieties of Hordeum vulgare. Aust.J.Biol.Sci.,  
18: 763-779.
- Greenway, H., 1973, Salinity, plant growth and metabolism.  
J.Aust.Inst.Agric.Sci., 39: 24-34.
- Greenway, H. and Osmond, C.B., 1972, Salt response of  
enzymes from species differing in salt tolerance.  
Plant Physiol., 49: 256-259.
- Gupta, U.S., and Parmil Kaur, 1970a, The relationship between  
salt tolerance and ascorbic acid content in Pisum  
sativum L. varieties. Curr.Sci., 39: 69-70.
- Gupta, U.S., and Parmil Kaur, 1970b, The relationship  
between salt tolerance and dehydrogenase activity in  
Pisum sativum L. varieties, Sci and Cult., 36: 293-294.

- Hageman, R.H., and Flesher, D., 1960, Nitrate reductase activity in corn seedlings as affected by light and nitrate content of nutrient medium. Plant Physiol., 35: 700-708.
- Halevy, A.H., 1963, Interaction of growth-retarding compounds and gibberellin on indoleacetic acid oxidase and peroxidase of cucumber seedlings. Plant Physiol., 38: 731-737.
- Hall, A.J., and Milthorpe, F.L., 1978, Assimilate source - sink relationship in Capsicum annuum L.III. The effects of fruit excision on photosynthesis and leaf and stem carbohydrates. Aust.J.Plant Physiol., 5: 1-13.
- Harper, J.E., and Paulsen, G.M., 1969, Nitrogen assimilation and protein synthesis in wheat seedlings as affected by mineral nutrition. I. macronutrients. Plant Physiol., 44: 69-74.
- Hartree, E.F., 1972, Determination of protein: A modification of the Lowry method that gives a linear photometric response. Anal.Biochem., 48: 422-427.
- Hasson-Porath, E., and Poljakoff-Mayber, A., 1971, Content of adenosine phosphate compounds in pea roots grown in saline media. Plant Physiol., 47: 109-113.

- Hegde, A.A., and Joshi, G.V. 1974, Mineral salt absorption in saline rice variety "Kala Rata". Plant and Soil., 4: 421-424.
- Heimer, Y.M., 1973, The effects of sodium chloride, potassium chloride and glycerol on the activity of nitrate reductase of a salt-tolerant and two non-tolerant plants. Planta, 113: 279-281.
- Hoagland, D.R., and Arnon, D.I., 1950, The water culture method for growing plants without soil. Circ. University Calif. Agric. Exp. Sta. No. 347.
- Huges, T.D., Butler, J.D., and Sanks, G.D., 1975, Salt tolerance and suitability of various grasses for saline road sides. Jenviron. Qual., 4: 65-68.
- Iwaki, S., Kawai, M., and Ikemota, S., 1958, Studies on the salt injury in rice plant Xvi. Proc. Crop. Sci. Soc. Japan, 27: 77-79.
- Iyengar, E.R.R., Kurian, T., Patolia, J.S., and Mehta, R.R., 1977, Varietal differences of barley, sorghum sunflower to sea water salinity during germination. Curr. Agric., 1: 9-13.
- Jackson, M.L., 1967, Soil Chemical analysis. pp. 259-264, Prentice-Hall of India Private Limited, New Delhi.

- Jacobsen, T., and Adams, R.M., 1978, Salt and silt in ancient mesopotamian agriculture. Science, 128: 1251.
- Janardhan, K.V., and Murthy, K.S., 1970, Effect of sodium chloride on leaf injury and chloride uptake by young rice seedlings. Indian J.Plant Physiol., 13: 225-232.
- Janardhan, K.V., and Murthy, K.S., 1972, Studies on salt tolerance in rice. III Relative tolerance of some local and high yielding rice varieties. Oryza, 9: 23-24.
- Janardhan, K.V., Parashivamurthy, A.S., Giriraj, K., and Panchaksharaiah, S., 1976a, Salt tolerance of cotton and potential use of saline water for irrigation. Curr.Sci., 45: 334-336.
- Janardhan, K.V., Parashivamurthy, A.S., Giriraj, K., and Panchaksharaiah, S., 1976b, Salt tolerance of rice seedlings in relation to quality of irrigation water. Mysore J.Agric.Sci., 10: 599-604.
- Jayaraman, J., 1981, Laboratory manual in biochemistry. Wiley Eastern Limited, New Delhi.
- Javed, A.S., and Khan, M.F.A., 1975, Effect of sodium chloride and sodium sulfate on IRRI rice. J.Agric.Res., 13: 705-710.

- John, C.D., Limpinuntana, V., and Greenway, H., 1977,  
Interaction of salinity and anaerobiosis in barley  
and rice. J. Exptl. Bot., 28: 133-141.
- Kabanov, V.V., and Ermakov, J.P., 1969, Effect of NaCl  
salinization on the volume and DNA content of pea  
cell nuclei. Soviet Plant Physiol., 16: 1025-1030.
- Kaddah, M.T., and Fakahry, S.I., 1961, Tolerance of  
Egyptian rice to salt. I. Salinity effects when  
applied continuously and intermittently at different  
stages of growth after transplanting. Soil Sci., 91:  
113-120.
- Kaddah, M.T., Lehman, W.F., and Robinson, F.F., 1973,  
Tolerance of rice to salt during boot, flowering  
and grain filling stage. Agron.J., 65: 845-847.
- Karmarkar, S.M., and Joshi, G.V., 1969, Effect of sand  
culture and NaCl on growth, physical structure and  
organic acid metabolism in Bryophyllum pinnatum.  
Plant and Soil, 30: 41-48.
- Kathirgamaraj, S., Williams, C.N., and Joseph, K., 1969,  
Effect of sea water on growth of rice in Malaysia.  
Expl. Agric., 5: 231-240.
- \* Khetawat, G.K., Moghe, V.B., and Mathur, C.M., 1967, Studies  
on salt resistance of various improved wheat  
varieties at germination and seedling stage in NaCl  
and Na<sub>2</sub>SO<sub>4</sub>. Labdev, 5: 254.

- Khot, S.B., 1978, Physiological studies in phaseolus aureus. M.Sc. Thesis submitted to Shivaji University, Kolhapur (India).
- Kim, C.M., 1958, Effect of saline and alkaline salts on the growth and internal components of selected vegetable plants. Physiologia pl., 11: 441-450.
- \* Klyshev, L.K., and Rakova, N.M., 1964, Effect of salinization of the substrate on the protein composition of the roots in pea shoots. Tr.Bot.Inst.Akad.Nauk.Kaz.SSR, 20: 156-165.
- Korkor, S.A., and Abdel-Aal, R.M., 1974, Effect of total salinity and type of salts on rice crop. Agric.Res. Rev.(Cairo)., 52: 73-78.
- Krishnamurthy, R., Anbazhagan, M., Bhagwat, K.A., 1986, Effect of NaCl on the inorganic ions, growth and yield of rice. Oryza, (In press).
- Kusunose, M., Nagai, S., Kusunose, E., and Yamamura, Y., 1956, Succinic dehydrogenase in the particulate fraction of Mycobacterium avium. J.Bacteriol., 72: 754-761.
- Kylin, A., and Gee, R., 1970, Adenosine triphosphatase activities in leaves of the mangrove Avicennia nitida Jacq. Plant Physiol., 45: 169-172.

Lai, Y.F., and Thompson, J.E., 1972, Effects of germination on  $\text{Na}^+$  -  $\text{K}^+$  - stimulated adenosine 5-triphosphatase and ATP - dependent ion transport of isolated membranes from cotyledons. Plant Physiol., 50: 452-457.

\* Latzko, E., 1954. The effect of  $\text{Cl}$  and  $\text{SO}_4$  nutrition on the enzyme activity of cultivated crops. Z.Pflernathr Dung, 66: 148-155.

Longnecker, D.E., 1973, The influence of soil salinity upon fruiting and shedding, Boll characteristics, Fiber quality and yield of two cotton species. Soil Sci., 115: 294-296.

Maas, E.V., and Nieman, R.G., 1978, Physiology of plant tolerance to salinity. In Crop tolerance to suboptimal land conditions. Jung, G.A. (Ed.), Am.Soc. Agron.Spec.Publ. 32: 277-299.

Mahabal Ram, 1986, High yielding varieties of crops. 2<sup>nd</sup> Ed., pp.289-290, Oxford and IBH Publishing Co., New Delhi.

Malek, Kaddah, M.T., and Salim Pakhary, 1961, Tolerance Egyptain rice to salt. I. Salinity effects when applied continuous and intermittently at different stages of growth after transplanting. Soil Sci., 91: 113-120.

Malik, C.P., and Singh, M.B., 1980, Plant enzymology and histo-enzymology. pp.73-74, Kalyani Publishers, New Delhi.



- \* Maliwal, G.L., 1975, Yield, Chemical composition and quality of tomato as affected by different quality irrigation waters. Agrokem Talajt., 24: 53-60.
- \* Maliwal, G.L., and Nanawati, G.C., 1974, Effect of salts on the growth, mineral nutrition and quality of brinjal (Solanum melongena). Agrokem. Talajt., 23: 119-124.
- Maliwal, G.L., and Paliwal, K.V., 1967, Salt tolerance studies on some varieties of wheat (Triticum aestivum) and barley (Hordeum vulgare) at germination stage. Indian J. Plant Physiol., 10: 26-35.
- Maliwal, G.L., and Paliwal, K.V., 1969, Salt tolerance of crops at germination stage. Ann. Arid Zone, 8: 109-125.
- Maliwal, G.L., and Paliwal, K.V., 1971a, Salt tolerance studies at germination stage. V. Paddy (Oryza sativa). Oryza, 8: 51-54.
- \* Maliwal, G.L., and Paliwal, K.V., 1971b, Fertilizer responses of barley irrigated with waters of different qualities. Agrokem Talajt., 20: 163-176.
- Maliwal, G.L., and Paliwal, K.V., 1972a, Enzymic activity and synthesis of nucleic acids in okra and spongegourd grown in saline substrate. Plant and Soil, 37: 221-228.

Maliwal, G.L., and Paliwal, K.V., 1972b, Effect of fertilizers and manure on the growth and chemical composition of wheat crop irrigated with saline water. Agrochimica, 16: 450-458.

\* Marschner, H., 1971, Why can sodium replace potassium in plants? Potash. Biochem. Physiol. Colloq. Int. Potash.Inst., 8: 50-63.

\* Marschner, H., and Schafarczyk, W., 1967, Comparative studies of the net uptake sodium and potassium by corn and sugar beet plants. Z. Pflanzenernahr. Bodenk., 118: 172-186.

Maskima, M.S., Saini, S.S., and Shahi, H.N., 1979, Screening of rice germplasm for tolerance to alkalinity. Indian J. Agric. Sci., 49: 659-663.

Mass, F.V., Gen ogata, and Garber, M.J., 1972, Influence of salinity on iron, mangelene and zinc uptake by plants. Agron. J., 64: 793-795.

Mathur, C.M., Moghe, V.B., and Khetawat, G.K., 1967, Studies on the salt tolerance of various improved wheat varieties at germination and seedling stage in sodium chloride and sodium sulphate solutions. Labdev J. Sci. Technol, 5: 254-257.

McCready, R.M., Guggolz, J., Silviera, V., Owens, H.S., 1950, Determination of starch and amylose in vegetables. Application to peas. Anal. Chem., 22: 1156-1158.

- Mukherjee, I., 1974, The effect of potassium on proline accumulation in maize during wilting. Physiol.Plant., 31: 288-291.
- Munns, R., Greenway, H., Delane, R., and Gibbs, J., 1982, Ion concentration and carbohydrate status of the elongating leaf tissue of Hordeum vulgare growing at high external NaCl. J.Exp. Bot., 33: 574-583.
- Murthy, K.S., and Narasinga Rao, C., 1965, Studies on salt concentration on yield and chemical composition of rice. Oryza, 1: 87-92.
- Murthy, K.S., and Narasinga Rao, C., 1967, Studies on salt tolerance in rice.II. Effect of different anions of sodium on yield and nitrogen content of rice. Oryza, 4 : 42-47.
- Narale, R.P., Subramanian and Mukerjee, R.K., 1969, Influence of salinity on germination, vegetative growth and grain yield of rice. Agron. J., 61: 341-343.
- Nieman, R.H., 1962, Some effects of NaCl on growth, photosynthesis and respiration of twelve crop plants. Bot.Gaz., 123: 279-285.
- Nieman, R.H., 1965, Expansion of bean leaves and its suppression by salinity. Plant Physiol., 40: 156-161.

- Nimbalkar, J.D., 1973, Physiological studies in sugarcane.  
Ph.D. Thesis submitted to Shivaji University,  
Kaihapur (India).
- Nouri, A.K., Hassan, James, V., Drew, Delno Kundesen, and  
Robert A. Olsen, 1970, Influence of soil salinity on  
production of dry matter and uptake and distribution  
of nutrients in barley and corn. Agron J., 62: 43-45.
- Ogra, R.K., and Baijal, B.D., 1978, Tolerance of some  
sorghum varieties to salt stress at early seedling  
stage. Indian J. Agric. Sci., 48: 713-717.
- Ozbun, J.L., Hawker, J.S., Greenberg, E., Lammel, C., Preiss,  
J., and Lee, E.Y.C., 1973, Starch synthetase,  
phosphorylase, ADP-glucose pyrophosphorylase, and  
UDP-glucose pyrophosphorylase in developing maize  
kernels. Plant Physiol., 51: 1-5.
- Pajanissamy, N., and Dhanapalamosi, A., 1973, Studies on  
saline irrigation water. I. Influence on growth,  
yield and composition of rice, (Oryza sativa L.). Var.  
'Padma'. Madras Agric. J., 60: 799-803.
- Paleg, L., 1960, Physiological effects of gibberellic acid.  
I. On the carbohydrate metabolism and amylase  
activity of the barley endosperm. Plant Physiol.,  
35: 293-299.

- Palfi, G., 1965, The effects of sodium salts on the nitrogen, phosphorous, potassium, sodium and amino acid content of rice shoots. Plant and Soil., 22: 127-135.
- Palfi, G., Ergsbet Koves, Mari Biro and Riba Sebestyen illus., 1974, The role of amino acids during water stress in species accumulating proline. Phyton. Rev. Int. Bot. Expt., 32: 121-128.
- \* Palfi, G., and Juhasz, J., 1968, Changes in the amino acid contents and plants caused by water deficiency and soil salinity. Agrokem. Talajt., 17: 243-254.
- \* Palfi, G., and Juhasz, J., 1970, Increase of the free proline in water deficit levels as a reaction to saline or cold root media. Acta. Agron. Acad. Sci. Hung., 19: 79-88.
- Paliwal, K.V., and Gandhi, A.P., 1975, Anion effect on germination and early stage of growth of four rice varieties of paddy (Oryza sativa) in saline media. Oryza, 12: 109-110.
- Paliwal, K.V., and Maliwal, G.L., 1971, Effect of fertilizers and manure on the growth and chemical composition of maize irrigated with different quality waters. Indian J. Agron., 16: 316-321.
- Paliwal, K.V., and Maliwal, G.L., 1975, Effect of salts on the growth and mineral nutrition of cabbage (Brassica oleracea) in soils and sand culture. Proc. Indian Natl. Acad. Sci., 41: 155-160.

- Pan, C.L., 1964, The effect of salt concentration of irrigation water on the growth of rice and other related problems. Int Rice Commn. Newsl., 13: 4-13.
- Panchaksharaiah, S., and Mahadevappa, M., 1971, Effect of salinity on the germination and seedling growth of some rice varieties. Madras Agri.J., 58: 665-667.
- Pathmanabhan, G., and Rao, J.S., 1976, Note on potassium as a possible index for screening sorghum varieties for salt tolerance. Indian J.Agric.Sci., 46: 392-394.
- Pathaik, 1967, Problem of saline and alkali soils, Lecture notes, Punjab Agri. Univ. India.
- Paricha, P.C., Patra, G.J., and Sahoo, P., 1975, Effect of synthetic sea water on growth and chemical composition of rice at different stages of development. J.Indian Soc.Soil Sci., 23: 344-348.
- Pearson, A.G., Ayers, A.D., and Eberhard, D.L., 1966, Relative salt tolerance of rice during germination and early seedling development. Soil Sci., 102: 151-157.
- Pearson, G.A., and Bernstein, L., 1959, Salinity effects at several growth stages of rice. Agron.J., 51: 654-657.
- Poonia, S.R., Virmani, S.M., and Bhumbla, D.R., 1972, Effect of ESP (exchangeable sodium percentage) of the soil on the yield, chemical composition and uptake of applied calcium by wheat. J.Indian Soc.SoilSci., 20: 183-185.

- Prisco, J.T., Ainouz, I.L., and Melo, S.C., 1975, Changes in nitrogenous compounds and proteases during germination of Vigna sinensis seeds. Physiol. Plant., 33: 18-21.
- Prisco, J.T., and Vieira, G.H.F., 1976, Effects of NaCl salinity on nitrogenous compounds and proteases during germination of Vigna sinensis seeds. Physiol. Plant., 36: 317-320.
- Prokrovskaya, E.I., 1958, Salt tolerance and some aspects of the metabolism of glycophytes. Soviet Plant Physiol., 5: 264-271.
- Rakova, N.M., Klyshev, L.K., and Stroganov, B.P., 1969, Effect of sodium sulfate and sodium chloride on the protein composition of pea roots. Soviet Plant Physiol., 16: 22-28.
- Ramanujam, T., and Sakharama Rao, J., 1969, Effect of salinity levels on IR-8 rice (Oryza sativa L.). Madras Agri. J., 56: 278-281.
- Rathert, G., 1982, Influence of extreme K: Na ratios and high substrate salinity on plant metabolism of crops differing in salt tolerance. VII. Relation between carbohydrates and degradative enzymes in salt tolerant and salt sensitive cotton genotypes during initial salinity stress. J. Plant Nutr., 5: 1401-1413.

- Rathert, G., 1983a, Effects of high salinity stress on mineral and carbohydrate metabolism of two cotton varieties. Plant and Soil, 73: 247-256.
- Rathert, G., 1983b, Carbohydrate status in response to ion regulation of two rice varieties (Oryza sativa L.) grown in saline medium. J.Plant Nutr., 6: 817-829.
- Rathert, G., 1985, The influence of high salt stress on starch, sucrose and degradative enzymes of two Glycine max varieties that differ in salt tolerance. J.Plant Nutr., 8: 199-209.
- Rathert, G., and Doering, H.W., 1983, Influence of extreme K:Na ratios and high substrate salinity on plant metabolism of crops differing in salt tolerance. VIII. Ionspecific salinity effects on carbohydrates and degradative enzymes of different salt tolerant soyabean varieties. J.Plant Nutr. 6: 817-829.
- Rathert, G., Doering, H.W., and Witt, J., 1981, Influence of extreme K:Na ratios and high substrate salinity on plant metabolism of crops differing in salt tolerance. III. K/Na effects on the carbohydrate pattern of bushbean and sugarbeet plants in response to the salt tolerance of the species. J.Plant Nutr., 4: 131-141.



- Ravikovitch, S., and Yoles, D., 1971, The influence of phosphorus and nitrogen on millet and clover growing in soils affected by salinity II. Plant composition. Plant and Soil, 35: 569-588.
- Ray Chaudhuri, S.P., 1964, Proceedings of the symposium on sodic soils, p.83-89. Published with financial assistance of UNESCO.
- Reddy, M.S., and Das, U.S.R., 1978, Effect of salinity and alkalinity on chloroplast metabolism and mineral constituents. Indian J.Plant Physiol., 21: 265-273.
- Richards, L.A., 1953, Diagnosis and improvement of saline and alkali soils. pp.102, U.S.Dept.Agr.Handbook No.60.
- Rosen, H., 1957, A modification nindyrin colorimetric analysis for amino acids. Arch.Biochem.Biophysics, 67: 10-15.
- Ruf, A., 1970, Salt tolerance studies of wheat C-273 and Mexipak (Red.). Banladesh. J.Soil Sci., 6: 32-37.
- Saakyan, R.G., and Petrosyan, G.P., 1964, Effect of soil salinity on the level of nucleic acids and nitrogenous substances in grape leaves. Soviet Plant Physiol., 11: 681-688.
- Scholander, P.F., Bredstreet, E.D., Hammel, H.T., 1966, Sap concentration in halophytes and some other plants. Plant Physiol., 41: 529-532.

- Seshagiri Rao, T., Achar, H.P., and Hadimani, As., 1970, Effect of soil salinity on germination of some high yielding paddy varieties, Proc. Symp. Management of saline and sodic soils.
- Shah, M.G., 1982, Problems of agricultural development in Gujarat. pp.14, Gandhinagar.
- Shere, S.M., Memon, K.S., and Khanzada, A.N., 1974, Effect of salinity on growth and mineral uptake of soyabean (Glycine max). Pak.J.Sci.Ind.Res., 17: 148-151.
- Shimose, N., 1957, Role of chlorine in crops. I. Effect of chloride on nitrogen metabolism of rice plants. J.Sci. Soil and Manure, Japan, 27: 193-196.
- Shimose, N., 1958, Role of chlorine in crops. 4. Effect of high NaCl and Na<sub>2</sub>SO<sub>4</sub> concentration on the growth of rice plants. J.Sci.Soil, Tokyo, 29: 158-162.
- Shimose, N., 1963, Physiology of salt injury in crops 2. Effect of high concentration of NaCl, Na<sub>2</sub>SO<sub>4</sub> in Carbohydrate metabolism in rice plants. J.Sci.Soil. Tokyo, 34: 111-114.
- Shimose, N., 1968, Physiology of salt injury in crops 8. Salt tolerance of maize, lucerne and Italian rye grass. J.Sci. Soil and Manure, Japan, 39: 554-557.

- \* Siegel, O., and Bjarsch, H.J., 1962, The effect of chloride and sulphate ions on the metabolism of tomato, celery and vines. Gartenbauwissenschaft, 27: 15-103.
- Singh, T.N., Aspinall, D., and Paleg, L.G., 1972, Proline accumulation and varietal adaptability to drought in barley, a potential metabolic measure of drought resistance. New Biol., 236: 188-190.
- Singh Lallan, and Mehrotra, C.L., 1971, Relative tolerance of paddy and wheat strains to salinity of salt solutions at germination stage. Proc. All India Symp. on soil Salinity, 220-223.
- Singh, T.N., Paleg, L.G., and Aspinall, D., 1973, Stress metabolism. I. Nitrogen metabolism and growth in the barley plants during water stress. Aust. J. Biol. Sci., 26: 45-56.
- Sinha, S.K., and Rajgopal, V., 1975, Effect of moisture stress in nitrate reductase activity and accumulation of proline in Sorghum. Proc. Symp on "Crop plant response to environmental stresses". IARI, New Delhi.
- Singh, O.S., and Vijayakumar, K.R., 1974, Carryover effects of salinity on yield and quality of wheat seed. Seed Res., 2: 13-18.

- Sivtsev, M.V., 1973, Photochemical activity of chloroplasts and bond strength of chlorophyll complex in cultured plants during action of herbicides, salinization and biologically active compounds. Soviet Plant Physiol., 20: 1176-1181.
- Snell, F.D., and Snell, C., 1949, Nitrites. In colorimetric methods of analysis. pp.802-807, Vol.2, 3rd Ed., Van Nostrand Co., New York.
- Stewart, G.R., and Lee, J.A., 1974, The role of proline accumulation in halophytes. Planta, 120: 279-289.
- Storey, R., and Wyn Jones, R.C., 1977, Quarternary ammonium compounds in plants in relation to salt resistance. Phytochem., 16: 447-453.
- Storey, R., and Wyn Jones, R.C., 1978, Salt stress and the comparative physiology of the Gramineae. III. Effect of salinity upon ion relations and glycine betaine and proline levels in spartinex townsendii. Aust.J. Plant Physiol., 5: 831-838.
- Storey, R., and Wyn Jones, R.C., 1979, Responses of Atriplex spongiosa and Suaeda monoica to salinity. Plant Physiol., 63: 156-162.
- \*Strickland, R.W., 1968, The use of saline water for irrigation rice in Northern Australia. Aust.J.Expt.Agric.Anim. Husb., 8: 491-495.

- Strogonov, B.P., Iyanitskaia, E.F., and Cherniadeve, I.P., 1956, Effect of high concentrations of salts on plants. Soviet Plant Physiol., 3: 319-327.
- Syed, M.M., and Swaify, E.L., 1973, Effect of saline water irrigation on N.Co.310 and H.50-7209 cultivars of sugarcane.II. Chemical composition. Trop.Agric. (Trinidad), 50: 45-51.
- Tal, M., 1977, Physiology of polyploid plants: DNA, RNA, protein, and absciscic acid in autotetraploid and deploid tomato under low and high salinity. Bot.Gaz. 138: 119-122.
- Taneja, S.R., and Sachar, R.C., 1974, Induction of polyphenol oxidase in germinating wheat seeds. Phytochem., 13: 2695-2702.
- Tanimota, T.T., 1969, Differential physiological response of sugarcane varieties to osmotic pressure of saline media. Crop.Sci., 9: 683-688.
- Tariq, A., Ali-Ani., and Nazar, A. Ouda, 1972, Distribution of cations in bean plants grown at varying  $K^+$  and  $Na^+$  levels. Plant and Soil., 37: 641-648.
- Thomas, M., and Beevers, H., 1949, Physiological studies on acid metabolism in green plants.II. Evidence of  $CO_2$  fixation in Bryophyllum and the study of diurnal variation of acidity in genus. New Phytol., 48: 421-447.

- Tsenov, E.I., Strogonov, B.P., and Kabanov, V.V., 1973,  
Effect of NaCl on the content and synthesis of  
nucleic acids in tissues tomato. Soviet Plant Physiol.,  
20: 54-61.
- Udayakumar, M., Rao, S.R., Prasad, T.G., and Sastry, K.S.K.,  
1976, Effect of potassium on proline accumulation in  
cucumber cotyledons. New Phytol., 77: 593-598.
- Umbriet, W.W., Burris, R.H., Stauffer, I.F., 1959,  
Manometric techniques, Burges Publishing Co.,  
Minneapolis.
- Venkateswarlu, J., Ramesh, M., and Murali Mohan Rao, 1972,  
Salt tolerance in rice varieties. J.Indian Soc.Soil  
Sci., 20: 169-173.
- Voetberg, G., and Stewart, C.R., 1984, Steady state  
proline levels in salt-shocked barley leaves.  
Plant Physiol., 76: 567-570.
- Weimberg, R., Lerner, H.R., and Poljakoff-Mayber, A., 1982,  
A relationship between potassium and proline accumu-  
lation in salt-stressed Sorghum bicolor. Physiol.  
Plant., 55: 5-10.
- Wignarajah, K., Jennings, D.H., and Handley, J.F., 1975, The  
effect of salinity on growth of Phaseolus vulgaris, I  
Anatomical changes in the first trifoliate leaf.  
Ann.Bot., 39: 1029-1038.

- Worthington, E.B., 1977, Arid land irrigation in developing countries. Pergamon Press, Oxford.
- Worthington Enzymes, 1963, Worthington Biochemical Corporation, Freehold, New Jersey.
- Wyn Jones, R.G., and Storey, R., 1978, Salt stress and comparative physiology in the gramineae. II. Glycine betaine and proline accumulation in two salt and water stressed barley cultivars. Aust. J. Plant Physiol., 5: 817-829.
- Yemm, E.W., Willis, A.J., 1954, The estimation of carbohydrates in plant extracts by anthrone. Biochem. J., 57: 508-514.
- Yeo, A.R., and Flowers, T.J., 1983, Varietal differences in the toxicity of sodium ions in rice leaves. Physiol. Plant., 59: 189-195.
- Yoshida, S., Forno, D.A., Cock, J.H., and Gomez, K.A., 1976, Laboratory manual for physiological studies of rice. Third edition, IRRI, Philippines.

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\* Original not seen.