

REFERENCES

- Abou-Waly, H.; Abou-Setta, M.M.; Nigg, H.N. and Mallory, L.L. (1991):** Growth response of freshwater algae, *Anabaena flos-aquae* and *Selenastrum capricornutum*, to atrazine and hexazinone herbicide. Bull. Environ. Contam. Toxicol. 46: 223-229.
- Adachi, M. and Hamada, K. (1971):** *Chlorella* assay of the activity of herbicides. Zasso Kenkya (Weed Research), 1970: 54-58. [Abstr. In Chem. Abstr., 76, 42559 (1972)].
- Ahluwalia, A.S. (1988):** Influence of saturn and knockweed on the growth and heterocyst formation in a nitrogen-fixing blue-green alga. Pesticides, 22 (10): 43-44.
- Ahmed, Z.A. (1994):** Preliminary survey of soil algal flora in Upper Egypt, Egypt. J. Bot., 34(1): 17-36.
- American Public Health Association (1992):** Standard methods for the examination of water and wastewater, 18th edition. American Public Health Association, American Water Works Association, and Water Pollution Control Federation, Washington, DC.
- Anand, N. (1989):** Handbook of blue-green algae (of rice field of south India). Bishen Singh Mahendra Pal Singh, 23-A connaught Place, Dehra Dun - 248001. pp 79.
- Anderson, J.R. (1978):** Pesticide effects on non target soil microorganisms. In "Pesticide Microbiology" (I.R. Hill and S.J.L. Wright, Eds.), pp. 313-353, Academic Press, New York / London.
- Antagnostidis, K.; Economou-Amilli, A. and Tsangridis, A. (1981):** Taxonomic and floristic studies on algae from rice-fields of Kalochorion-Thessaloniki, Greece. Nova Hedwigia, 34: 1-66.
- Anton, F.A.; Ariz, M. and Alia, M. (1993):** Ecotoxic effects of four herbicides (glyphosate, alachlor, chloroluron and isoproturon) on the algae *Chlorella Pyrenoidosa* Chick. The Science of the Total Environment, Supplement.
- Aref, E.M. (1991):** Ecological studies on nitrogen-fixing algae. Faculty of Agriculture, Cairo University, M.Sc.

- Ashton, F.M.; Bisalputra T.; and Risley, E.B. (1966):** Effect of atrazine on *Chlorella vulgaris*. Am. J. Bot., 53: 217-219.
- Averamova, S. and Rossler, M. (1975):** Effect of various temperatures on some physiological-biochemical induces during the light phase of the life cycle of *Scenedesmus* sp. Appl. Microbiol., 5: 115-120.
- Bartels, P.G. and Hilton, J.L. (1973):** Pestic. Biochem. Physiol., 3: 462.
- Batterton, J.C.; Bousch, G.M. and Matsumura, F. (1972):** DDT inhibition of sodium chloride tolerance by the blue-green alga *Anacystis nidulans*. Science, 176: 1141-1143.
- Bhunja, A.K.; Basu, N.K.; Roy, D.; Chakrabarti, A. and Banerjee, S.K. (1991):** Growth, and Chlorophyll *a* content, nitrogen-fixing ability and certain metabolic activities of *Nostoc muscorum*: effect of methylparathion and benthocarb. Bull. Environ. Contam. Toxicol., 47: 43-50.
- Bhunja, A.K.; Marik, R. and Banerjee, S.K. (1994):** Biochemical effects of carbaryl on nitrogen assimilating enzymes of Cyanobacteria *Nostoc muscorum*. Bull. Environ. Contam. Toxicol., 52: 886-892.
- Bold, H.C. and Wynne, M.J. (1978):** introduction to the algae: Structure and Reproduction, Engelwood Cliffs, New Jersey: Prentice Hall Inc.
- Bonilla, S.; Conde, D. and Blanck, H. (1998):** The photosynthetic responses of marine phytoplankton, Periphyton and epipsammon to the herbicides paraquat and simazine. Ecotoxicology, 7: 99-105.
- Booth, R. L. and Lobering, L. B. (1973):** Evaluation of the Auto-Analyser II-A. progress report. In Advances in Automated Analysis: 1972 Technicon International Congress. Vol. 8,P. 7, Mediad Inc.
- Brack, W. and Frank, H. (1998):** Chlorophyll *a* fluorescence: A tool for the investigation of toxic effects in the photosynthetic apparatus. Ecotoxicology and Environmental Safety, 40: 34-41.
- Bradford, M.M. (1976):** A rapid and sensitive method for the estimation of microgram quantities of protein utilizing the principle of protein-dye binding. Anal. Biochem., 72: 248-254.
- Butler, G.L. (1977):** Algae and Pesticides. Residue Review, 66: 19-62.

- Cain, J.R. and Cain, R.K. (1983): The effect of selected herbicides on zygospore germination and growth of *Chlamydomonas moewusli* (chlorophyceae, volvocales). *Journal of Phycology*, 19: 301-305.
- Catling, H.D.; Marhnez, M.R. and Islam, Z. (1981): Survey of algae associated with deepwater rice in Bangladesh. *Water Int.*, 8: 74-81.
- Caux, P.Y.; Menard, L. and Kent, R.A. (1996): Comparative study of the effects of MCPA, butylate, atrazine and cyanazine on *Selenastrum capricornutum*. *Envir. Pollut.*, 92(2): 219-225.
- Chen, P.C. (1986): Effects of herbicides on growth and photosynthesis of *Anabaena* CH2 and CH3. *Proc. Nat. Sci. Counc. B. ROC*, 10(3): 151.
- Corbett, J.R.; Wright, K. and Baillie, A.C. (1984): *The Biochemical Mode of Action of Pesticides*. [Second Ed.] Academic Press, London.
- Cullimore, D.R. (1975): The *in vitro* sensitivity of some species of Chlorophyceae to a selected range of herbicides. *Weed Res.*, 15: 401.
- Cullimore, D.R. and McCann, A.E. (1977): Influence of four hebicides on the algal flora of a prairie soil. *Plant and Soil*. 46: 499.
- Das, B. and Singh, K. (1977): The effect of 2,4-dichlorophenoxy acetic acid on growth and nitrogen-fixation of blue-green alga *Anabaenopsis raciborskii*. *Arch. Environ. Contam. Toxicol.*, 5: 437-445.
- Day, K.E. and Hodge, V. (1996): The toxicity of the herbicide metolachlor, some transformation products and a commercial safener to an alga *Selenastrum Capricornutum*, a Cyanophyte *Anabaena Cyldrince* and a macrophyte *Lemna gibba*. *Water qual. Res. J. Canadian*, 31(1): 197-214.
- Dubois, M.; Gilles, K.A.; Hamilton, J.K.; Repers, P.A. and Smith, F. (1956): Colorimetric method for determination of sugars and related substances. *Analyt. Chem.*, 28: 350-356.
- Desikachary, T.V. (1959): *Cyanophyta*. Academic press, New York and London Indian council of agricultural research, New Delhi, 617pp.

- Dewis, J. and Freitas, F. (1970): In : Physical and chemical methods of soil and water analysis, Soils Bulletin No.10. Food and Agriculture Organization of the United Nations, Rome.
- Dillard G.E. (1989a): Freshwater algae of the southeastern United States. Part 1. Chlorophyceae: Volvocales, Tetrasporales and Chlorococcales. Bibliotheca Phycologica, band 81.
- Dillard G.E. (1989b): Freshwater algae of the southeastern United States. Part 2. Chlorophyceae: Ulotricales, Microsporales, Cylindrocapsales, Sphaeropleales, Chaetophorales, Cladophorales, Schizogoniales, Siphonales and Oedogoniales. Bibliotheca Phycologica, band 83.
- El-Dib, M.A.; Shehata, S.A. and Abou-Waly, H.F. (1989): Response of freshwater alga *Scenedesmus* to triazine herbicides. Water, Air and Soil Pollution, 48: 307-316.
- El-Dib, M.A.; Shehata, S.A. and Abou-Waly, H.F. (1990): Response of freshwater algae (*Scenedesmus* spp.) to phenylurea herbicides. Water, Air and Soil Pollution, 53: 295-303.
- El-Haddad, M.F.; Mahmoud, S.A.Z.; El-Sawy, M.; Mashhour, W.A. and Salem, K.G. (1986): Changes in metabolic activities of *Nostoc muscorum* and *Anabaena oryzae* in response to herbicide applications. 1- Effect of molinate and benthocarb. Soil Biology and Conservation of the Biosphere (J. Szegi ed.).
- Ellis, J.; Higgins, E.; Pruss, S. and Norton, J. (1976): Management of aquatic vegetation with simazine. Proc. Northeast. Weed Sci. Soc., 30: 86-91.
- El-Sheekh, M.M.; Kotkat, H.M. and Hammouda, O.H.E. (1994): Effects of atrazine herbicide on growth, photosynthesis, protein synthesis, and fatty acid composition in the unicellular green alga *Chlorella kessleri*. Ecotoxicol. Environ. Saf., 29: 349-358.
- Fahl, G.M.; Kreft, L.; Alterburger, R.; Faust, M.; Boedeker, W. and Grimme, L.H. (1995): pH-Dependent sorption, bioconcentration and algal toxicity of sulfonylurea herbicides. Aquat. Toxicol., 31: 75-187.
- Fliedner, A. (1997): Ecotoxicity of poorly water-soluble substances. Chemosphere, 35: 295-305.

- Fores E. and Comin F.A. (1987): Chemical characteristics of the water in the rice fields of the Ebro Delta (N.E. Spain). Arch. Hydrobiol., 111: 15-24.
- Fott, B. (1972): Das phytoplankton des subwassers chlorophyceae, ordnung: Tetrasporalis. Stuttgart: 116 pp.
- Fournadzhieva, S.; Kassabov, P.; Andreeva, R.; Petkov, G. and Ditttr, F. (1995): Influence of the herbicide simazine on *Chlorella*, *Scenedesmus*, *Arthrospira*. Algological Studies, 76: 97-109.
- Gadkari, D. (1988): Assessment of the effects of the photosynthesis-inhibiting herbicides diuron, DCMU, metamiltron and metribuzin on growth and itrogenase activity of *Nostoc muscorum* and a new Cyanobacterial isolate, strain G4. Biology and Fertility of Soil, 6: 50-54.
- Goyal, S.K. (1986): Interaction between pesticides and Cyanobacteria. Proc. Natl. Symp. Curr. Status of BNF, Haryana Agricultural University, Hissar, 93-96.
- Goyal, S.K. (1989): Stress compatibility in Cyanobacteria. Phykos, 28: 267-273.
- Goyal, S.K. (1993): Algal biofertilizer for vital soil and free nitrogen. Proc. Indian natn. Sci. Acad. B59 Nos. 3 & 4 pp. 295-302.
- Gramlich, J.V. and Frans, R.E. (1964): kinetics of *Chlorella* inhibition by herbicides. Weed, 12: 184-189.
- Gregory, W.W.; Reed, J.K. and Priester, L.E. (1969): Accumulation of parathion and DDT by some algae and protozoa. J. Protozool., 16:69-71.
- Gruenhagen, R.D. and Moreland, D.E. (1971): Effects of herbicides on ATP levels in excised soybean hypocotyles. Weed Sci., 19: 319.
- Guoan, A.Y.; Yan X. and Wu, W. (1997): Effects of the herbicide molinate on mixotrophic growth, photosynthetic pigments, and protein content of *Anabaena spherica* under different light conditions. Ecotoxicol. Environ. Saf., 38: 144-149.
- Hamilton, P.B.; Jackson, G.S.; Kaushik, N.K.; Solomon, K.R. and Stephenson, G.L. (1988): The impact of two applications of atrazine

on the plankton communities of in situ enclosures. *Aquatic Toxicology*, 13: 123-140.

Hansson, O. and Wydrzynski, T. (1990): Current perceptions of photosystem II. *Photosystem Res.*, 23: 1313-1362.

Harrison, P.J.; Thompson, P.A. and Calderwood, G.S. (1990): Effects of nutrient and light limitation on the biochemical composition of phytoplankton. *J. Appl. Phycol.*, 2: 45-46.

Hauke-Pacewiczowa, T. (1971): Influence of herbicides on the activity of soil microflora. *Pamięt Pulawski.*, 46: 5.

Hawxby, K.; Tubea, B.; Ownby, J. and Basler, E. (1977): Effects of various classes of herbicides on four species of algae. *Pesticide Biochemistry and physiology*, 7: 203-209.

Henley, W.J. (1993): Measurement and interpretation of photosynthetic light-response curves in algae in the context of photoinhibition and diel changes. *J Phycol.*, 29: 729-739.

Henley, W.J.; Levavasseur, G.; Franklin, L.A.; Osmond, C.B. and Ramus, J. (1991): Photoacclimation and photoinhibition in *Ulva roundata* as influenced by nitrogen availability. *Planta*, 184: 253-243.

Henley, W.J. and yin, y. (1998): Growth and photosynthesis of marine *Synechococcus* (cyanophyceae) under iron stress. *J. Phycol.*, 34: 94-103.

Hess, F.D. (1980): A *Chlamydomonas* algal bioassay for detecting growth inhibitor herbicides. *Weed science*, 28 (5): 515 - 520.

Hess, F.D. (1982): Communications (Dinitroaniline herbicides adsorb to glass). *J. Agric. Food Chem.*, 30: 389-391.

Hess, F.D. and Bayer, D.J. (1974): *J. Cell Sci.*, 15: 429. Cited from (Corbett, J.R.; Wright, K. and Baillie, A.C. (1984): Compounds interfering with cell growth, division and development. In " The Biochemical Mode of Action of Pesticides"[Second Ed.]. Academic Press, London. pp 353.

Higazy, A. and Fayez, M. (1989): Effect of some herbicides on growth and Diazotrophy of Cyanobacteria isolated from Egyptian rice field. *Annals*

Agric. Sci. Fac. Agric. Ain Shams Univ., Cairo, Egypt, 34(2): 765-779.

Hiranpradit, H. and Foy, C.L. (1992): Effect of four triazine herbicides on growth of nontarget green algae. *Weed Science*, 40: 134-142.

Ishikawa, K.; Nakamura, Y.; Niki, Y. and Kuwatsuka, S. (1977): Photodegradation of benthocarb herbicide. *J. Pesticide Sci.*, 2: 17-25.

Iyengar, M.O.P. (1933): On an Indian form of *Protosiphon botryoides* Klebs. *Arch. Protistenk.*, 79: 298-302.

Jackson, M. L. (1960): Soil chemical analysis. Prentice Hall, Inc. Englewood Cliffs, N.J., 498 pp.

Jackson, W.T. and Steler, D.A. (1973): *Can. J. Bot.*, 51: 1513. Cited from Corbett, J.R.; Wright, K. and Baillie, A.C. (1984): Compounds interfering with cell growth, division and development. In "The Biochemical Mode of Action of Pesticides"[Second Ed.]. Academic Press, London. pp 353.

Jones, C.G.; Hare, J.D. and Compston, S.J. (1989): Measuring plant protein with the Bradford assay. 1- Evaluation and standard method. *J. Chem. Ecol.*, 15(3): 979-992.

Jurgensen, M. F. and Davey, C. B. (1968): Nitrogen fixing blue-green algae in acid forest and nursery soils. *Can. J. Microbiol.*, 14: 1179.

Kapoor, K. and Sharma, V.K. (1980): Effect of certain herbicides on survival, growth, and nitrogen fixation of blue-green alga *Anabaena doliolum* Bharadwaj. *Zeitschrift für Allgemeine Mikrobiologie*, 20(7): 465-469.

Kar, S. and Singh, P.K. (1978): Effect of pH, light intensity and population on the toxicity of the pesticide carbofuran to the blue-green alga *Nostoc muscorum*. *Microbios*, 21: 177-184.

Kar, S. and Singh, P.K. (1979): Effect of nutrients on the toxicity of pesticides carfuran and hexachlorocyclohexane to blue-green alga *Nostoc muscorum*. *Z. Allg. Mikrobiol.*, 19 (7): 467-472.

- Kasai, F. and Hatakeyama, S. (1993): Herbicides susceptibility in two green algae, *Chlorella vulgaris* and *Selenastrum capricornutum*. *Chemosphere*, 27(25): 899-904.
- Kasai, F.; Takamura, N. and Hatakeyama, S. (1993): Effects of simetryne on growth of various freshwater algal taxa. *Environmental Pollution*, 79: 77-83.
- Kashyap, A.K. and Pandey, K.D. (1982): Inhibitory effects of rice-field herbicide machete on *Anabaena doliolum* Bharadwaja and Protection by nitrogen sources. *Z. Pflanzen. Physiol.*, 107: 329-345.
- Kirby, M.F. and Sheahan, D.A. (1994): Effects of atrazine, isoproturon and mecoprop on the macrophyte *lemna minor* and the alga *Scenedesmus subspicatus*. *Bull. Environ. Contam. Toxicol.*, 53: 120-126.
- Kirkwood R.C. and Fletcher W.W. (1970): Factors influencing the herbicidal efficiency of MCPA and MCPB in three species of micro-algae. *Weed Res.*, 10: 3-10.
- Kiss, A. (1967): Microbiological examination of the action of herbicides used in vineyards in soil developed on loess. *Agrokemia es Talaiyan. Tom.*, 16(1-2): 111.
- Kobbia, I.A. and El-Sharouny, H.M. (1983): The effect of 2,4-D on nitrogen fixing capacity of some blue-green algae. *Egyptain Society of Applied Microbiology, Proc. V Conf. Microbiol., Cairo, May 1983. Vol. II- Soils & Water Microbiol. Paper No. 50.*
- Kobbia, I.A.; Salama, A.M. and Shabana, E.F. (1987): Changes in growth, carbohydrate and nitrogen metabolic processes in *Anabaena flos-aquae* and *Phormidium fragile* (Cyanophyta), under the combined effect of Amitrole and Dalapon. *Cryptogamie, Algologie*, 8(1): 19-28.
- Kobbia, I.A. and Shabana, E.F. (1988): Studies on the soil algal flora of Egyptian Bahariya Oasis. *Egypt. J. Bot.*, 31(1-3): 23-43.
- Kobbia, I.A.; Shabana, E.F.; Khalil, Z. and Zaki, F.T. (1991): Growth criteria of two common Cyanobacteria isolated from Egyptian flooded soil, as influenced by some pesticides. *Water, Air and Soil Pollution*, 60: 107-116.

- Kolte, S.O. and Goyal, S.K. (1985): Distributional pattern of blue-green algae in rice field soils of Vidarbha region of Maharashtra State. *Phykos*, 24: 256-162.
- Kolte, S.O. and Goyal, S.K. (1992): On the effect of herbicides on growth and nitrogen fixation by Cyanobacteria. *Acta Bot. Indica*, 20: 225-229.
- Lagoutte, B. and Mathis, P. (1989): The photosystem I reaction center: structure and photochemistry. *Photochem. Photobiol.*, 49: 833-44.
- LeBaron, H.M.; Mcfarland, J.E.; Simoneaux, B.J. and Ebert, E. (1988): Metolachlor, P. 335-382. In P.C.Kearney and D.D. Kaufman (ed.), *Herbicides. Chemistry, degradation and mode of action*, Vol, 3. Marcel Dekker, Inc., New York.
- Leganes, F. and Fernandez, E. (1992): Effect of phenoxy acetic herbicides on growth, photosynthesis, and nitrogenase activity in Cyanobacteria from rice fields. *Arch. Environ. Contam. Toxicol.*, 22 130-134.
- Lee, H.k.; Park, J.E.; Ryu, G.H.; Lee, J.O. and Park, Y.S. (1992a): Fresh-water algae occurred in paddy rice fields III-Identification and propagation of green algae. *The Korean Journal of weed science.*, 12(4): 335-351.
- Lee, H.k.; Park, J.E.; Ryu, G.H.; Lee, J.O. and Park, Y.S. (1992b): Fresh-water algae occurred in paddy rice fields IV-Identification of stoneworts, euglenoids and diatoms. *The Korean Journal of weed science*, 12(4): 352-361.
- Lee, H.k.; Park, J.E.; Ryu, G.H.; Lee, J.O. and Park, Y.S. (1993a): Fresh-water algae occurred in paddy rice fields V- Fertilizer response and chemical control. *The Korean Journal of weed science*, 13(1): 1-6.
- Lee, H. k ; Park, J. E; Ryu, G. H; Lee, J.O and Park, Y.S (1993b): Fresh-water algae occurred in paddy rice fields VI-Ecology of suspensible green algae and soil-flakes and their chemical control. *The Korean Journal of weed science*, 13(1): 96-103.
- Leuven, R.S.E.W.; Van Der Velde, G. and Kersten, H.L.M. (1992): interrelations between pH and other physico-chemical factors of Dutch soft waters. *Arch. Hydrobiol.*, 126: 27-51.

- Lipnitskaya, G.P. and Kruglov, Y.U.V. (1967):** The effect of triazine herbicides on soil algae. *Weed Science*, 17: 110.
- Loeppky, C. and Tweedy, B.G. (1969):** Effects of Selected Herbicides upon growth of soil algae. *Weed Science*, 17(1): 110-113.
- Maher, S.M.L. (1946):** The role of certain environmental factors in growth and reproduction of *Protosiphon botryoides* Klebs. I. Races, strains and clones. *Bull. Torrey Bot. Club*, 73: 573-587.
- Maher, S.M.L. (1947):** The role of certain environmental factors in growth and reproduction of *Protosiphon botryoides* Klebs. II. Vegetative growth. *Bull. Torrey Bot. Club*, 74: 20-37.
- Mahmoud, A.H.H.; Azazy M.A. and Hashish, R.M. (1988):** Effect of certain herbicides on the non-symbiotic nitrogen fixation by some strains of blue-green algae. *Al-Azhar J. Agric. Res.*, 9: 133-145.
- Mansour, F.A.; Soliman, A.I.; Shaaban-Desouki, S.A. and Hussein, M.H. (1994):** Effect of herbicides on Cyanobacteria I. Changes in carbohydrate content, PMase and GOT activities in *Nostoc kihlmani* and *Anabaena oscillarioides*. *Phykos*, 33: 153-162.
- Martinez, f.; Jarillo, J.A. and Orus, M.I. (1991):** Interactions between trichlorofon and three chlorophyceae. *Bull. Environ. Contam. Toxicol.*, 46: 599-605.
- Maule, A. and Wright, S.J.L. (1983):** Physiological effects of chlorpropham and 3-chloroaniline on some Cyanobacteria and a green alga. *Pestic. Biochem. Physiol.*, 19: 196.
- Maule, A. and Wright, S.J.L. (1984):** Herbicide effects on the population growth of some green algae and Cyanobacteria. *Journal of Applied Bacteriology*, 57(2): 369-379.
- Mayasich, J.M.; Karlander, E.P. and Terlizzi, D.E. (1986):** Growth responses of *Nannochloris oculata* Droop and *Phaeodactylum tricornutum* Bohlin to the herbicide atrazine as influenced by light intensity and temperature. *Aquatic Toxicology*, 8: 175-184.
- McCann, A. and Cullimore, D.R. (1979):** Influence of pesticides on the soil algal flora. *Residue Reviews*, 72: 1-31.

- Megharaj, M.; Venkateswarlu, K. and Rao, A.S. (1989a):** Growth response of four species of soil algae to monocrotophos and quinalphos. *Environmental pollution (Series A)* 42: 15-22.
- Megharaj, M.; Venkateswarlu, K. and Rao, A.S. (1989a):** Effect of glucose addition on the toxicity of nitrophenols to *Synechococcus elongatus* and *Nostoc linckia*. *Phykos*, 28: 151-155.
- Megharaj, M.; Venkateswarlu, K. and Rao, A.S. (1989b):** Effects of carofuran and carbaryl on the growth of a green alga and two Cyanobacteria isolated from rice soil. *Agriculture, Ecosystems and Environment*, 25: 329-336.
- Megharaj, M.; Madhavi D.R.; Sreenivasulu, C.; Umamaheswari, A. and Venkateswarlu, K. (1994):** Biodegradation of methylparathion by soil isolates of microalgae and Cyanobacteria. *Bull. Environ. Contam. Toxicol.*, 53: 292-297.
- Mehta, R.S. and Hawxby, K.W. (1979):** Effects of simazine on the blue-green alga *Anacystis nidulans*. *Bull. Environ. Contam. Toxicol.*, 23: 319-326.
- Metting, B. and Rayburn, W. (1979):** The effects of the pre-emergence herbicide diallate and the post-emergence herbicide MCPA on the growth of some soil algae. *Phycologia*, 18(3): 269-272.
- Mikhailova, E.I. and Kruglov, Y.V. (1973):** Effect of some herbicides on soil algaeflora. *Pochvovedenie*, 8: 81.
- Mishra, A.K. and Pandey, A.B. (1989):** Toxicity of three herbicides to some nitrogen fixing Cyanobacteria. *Ecotoxicol. Environ. Saf.*, 17: 236-246.
- Moewus, F. (1933):** Untersuchungen uber die sexualitat und entwicklung von chlorophyceen. *Arch. Protistenk.*, 80: 469-526.
- Mohapatra, P.K. and Mohanty, R.C. (1992):** Differential effect of dimethoate toxicity to *Anabaena doliolum* with change in nutrient status. *Bull. Environ. Contam. Toxicol.*, 48: 223-229.
- Mohapatra, P.K.; Schubert, H. and Schiewer, U. (1997):** Effect of dimethoate on photosynthesis and pigment fluorescence of *Synechocystis* sp. PCC 6803. *Ecotoxicol. Environ. Saf.*, 36: 231-237.

- Mohapatra, P.K.; Sethi, P.K. and Mohanty, R.C. (1990):** Toxicity of dimethoate to the Cyanobacterium *Anabaena doliolum* Bhar. Trends Ecotoxicol, AEB, Muzaffarnagar, pp189-196.
- Moreland, D. E. (1980):** Mechanisms of action of herbicides. Ann. Rev. Plant Physiol., 31: 597-638.
- Moreland, D.E. and Hill, K.L. (1959):** The action of alkyl-N-phenyl carbamates on photolytic activity of isolated chloroplasts. J. Agric. Food chem.. 7: 832.
- Mostafa, I.Y.; Shabana, E.F.; Khalil, Z. and Mostafa, F.I.Y.(1991):** The metabolic fate of ^{14}C -parathion by some freshwater phytoplankton and its possible effects on the algal metabolism. J. Environ. Sci. Health, 26(B): 499-512.
- Mostafa, F.I.Y. (1995):** Studies on the interaction of certain pesticides with two common soil algae as influenced by some environmental factors. Ph. D. Dissertation, Faculty of Science, Cairo University. PP. 158.
- Muralikrishna, P.V.G. and Venkateswarlu, K. (1984):** Effect of insecticides on soil algal population. Bull. Environ. Contam. Toxicol., 33: 241-245.
- Myklestad, S. and Haug, A. (1972):** Production of carbohydrates by the marine diatom *Chaetoceros affinis* var. *willei* (Gan) Hustedt. I. Effect of the concentration of nutrients in the culture medium. J. Exp. Mar. Biol. Ecol., 9: 125-136.
- Nagpal, V. and Goyal, S.K. (1992):** Growth responses of Cyanobacteria to herbicides. Acta Bot. Indica, 20: 173-176.
- Neumann, W.; Laasch, H. and Urabach, W. (1987):** Mechanisms of herbicide Sorption in microalgal and influence of environmental factors. Pastic. Biochem. Physiol., 27: 189-200.
- Nichols, H.W. (1973):** Growth media-Freshwater. In "Stein, J.R.; Hand Book of Phycological methods" Camberidge Univ. Press. New York, USA, pp 7-24.
- Okay, O.S. and Gaines A. (1996):** Toxicity of 2,4-D acid to phytoplankton. Water Research, 30(3): 688-696.

- O'Neal, S.W. and Lembi, C.A. (1983): Effect of simazine on photosynthesis and growth on filamentous algae. *Weed Science*, 31: 899-903.
- Orus, M.I.; Marco, E. and Martinez, F. (1990): Effect of trichlorfon on N₂-fixing Cyanobacterium *Anabaena* PCC 7119. *Arch. Environ. Contam.*, 19: 297-301.
- Osman, M.E.H.; Younis, M.E. and Soilman, A.I. (1984): Effect of carbetamide on some growth parameters, Carbohydrate and nitrogen metabolism of *Scenedesmus abundans*. *Beitr. Biol. Pflanzen.*, 59: 261.
- Paech, k. and Tracey, M. V. (1956): Modern methods of plant analysis. Springer, Verlag, Berlin.
- Pandey, A.K.; Srivastava, V. and Tiwari, D.N. (1984): Toxicity of the herbicide stam F-34 (Propanil) on *Nostoc calcicola*. *Z. Allg. Mikrobiol.*, 24: 369-379.
- Pandey, A.K. (1985): Effects of propanil on growth and cell constituents of *Nostoc calcicola*. *Pesticide Biochemistry and Physiology*, 23: 157.
- Parson, J.M. and Bruce, C.P. (1993): Seasonal pattern of ammonium (methylamine) uptake by phytoplankton in an oligotrophic lake. *Hydrobiologia*, 250: 105-117.
- Pentecost, A. (1984): Introduction to freshwater algae. Published by the Richmond Co. Ltd. Orchard Road, Richmond, Surrey, England. 247pp.
- Percival, M.P. and Baker, N.R. (1991): Herbicides and photosynthesis. In baker NR, Percival MP (eds.), *Herbicides (Topics in photosynthesis, Vol. 10)*. Elsevier, Amsterdam: 1-26.
- Peterson, H.G.; Boutin, C.; Martin, P.A.; Freemark, K.E.; Ruecker, N.J. and Moody, M.J. (1994): Aquatic phyto-toxicity of 23 pesticides applied at expected environmental concentrations. *Aquat. Toxicol.*, 28: 275-292.
- Piska, R.S. and Waghay, S. (1991): Toxic effects of dimethoate on primary production of lake ecosystem. *Indian J. Environ. Health*, 33: 126-127.
- Platt, T.; Gallegos, C.L. and Harrison, W.G. (1980): Photoinhibition of photosynthesis in natural assemblages of marine phytoplankton. *J.Mar. Res.*, 38 (4): 687-701.

- Prescott, G. W. (1954):** How to know the fresh water algae .Brown com., Dubuque Iowa, 415 pp.
- Quesada, A.; Maeso, E. and Valiente, E. (1995):** Seasonal variation in the physical and chemical characteristics of a shallow water ecosystem, the rice fields of Valencia, Spain. Arch. Hydrobiol., 132(4): 495-511.
- Raghu, K. and MacRae, I.C. (1967):** The effect of the gamma-isomer of benzene hexachloride upon the micro-flora of submerged rice soils. 1. Effect upon algae. Can. J. Microbiol., 13: 173.
- Redondo, M.J.; Ruiz, M.J.; Boulda, R. and Font, G. (1994):** Determination of thiobencarb residues in water and soil using solid-phase extraction discs. J. Chromatography A, 678: 375-379.
- Rhee, G.Y. (1978):** Effects of N:P atomic ratios and nitrate limitation on algal growth, cell composition and nitrate uptake. Limnol. Oceanogr. 23: 10.
- Rice, C.P. and Sikka, H.C., (1973):** Uptake of and metabolism of DDT by six species of marine algae. J. Agric. Food Chem., 21:148.
- Rochaix, J.D. and Erickson, J. (1988):** Function and assembly of photosystem II: genetic and molecular analysis. TIBS, 13: 56-59.
- Roger, P.A.; Zimmerman, W.J. and Lumpkin, T.A. (1993):** Microbiological management of wetland rice fields. In Metting B. (ed.): Soil microbial ecology. Marcel Dekker, Inc., New York.
- Roger, P. A.; Simpson, I.; Oficial, R.; Ardales, S.; Jimenez, R.; Teng, P. S; (ed); Heong, K. I. (ed), Moody, K. (1994):** Impact of pesticides on soil and water microflora and fauna wetland. Rice pest science and management, 255-276 selected paper from the international rice research conference.
- Ross, L.J. and Sava, R.J. (1986):** Fate of thiobencarb and molinate in rice fields. J Env. Qual., 15: 220-225.
- Rossum, J. R. and Villarux, P. (1961):** Suggested methods for turbidometric of sulfate in water, J. Amer. Water Works ASS, 53: 873.
- Ruzycki, E.M.; Axiler, R.P.; Owen, C.J. and Martin, T.B. (1998):** Response of phytoplankton photosynthesis and growth to the aquatic

herbicide hydrothol 191. Environmental Toxicology and Chemistry, 17(8): 1530-1537.

Ryan, B. J.; Riemer, D. N. and Toth, S. J. (1972): Effects of fertilization on aquatic plants, Water and bottom sediments. Weed Sci., 20: 482-485.

Sabater, C. (1994): Degradation de plaguicidas en aguas contaminadas. Thesis Doctoral, Universidad Polit cnica de Valencia.

Sabater, C. and Carrasco, J.M. (1996): Effect of thiobencarb on the growth of three species of phytoplankton. Bull. Environ. Contam. Toxicol., 56: 977-984.

Salama, A. M. and Kobbia, I. A. (1982): Studies on the algal flora of Egyptian soils. II-Different sites of a sector in the Lybian Desert. Egypt. J. Bot., 25: 139.

Samson, G. and Popovic, R. (1988): Use of algal fluorescence for determination of phytotoxicity of heavy metals and pesticides as environmental pollutants. Ecotoxicology and Environmental Safety, 16: 272-278.

Saroja, G. and Bose, S. (1982): Effect of methylparathion on the growth, cell size, pigment and protein content of *Chlorella protothecoides*. Environ. Pollut., 27: 297-308.

Shabana, E.F. (1987): Use of algal batch assays to assess the toxicity of atrazine to some selected Cyanobacteria. I. Influence of atrazine on the growth, pigmentation and carbohydrate contents of *Aulosira fertilissima*, *Anabaena oryza*, *Nostoc muscorum* and *Tolypothrix tenuis*. J. Basic Microbiology, 27 (2): 113-119.

Shabana, E.F. and Abou-Waly, H.F. (1995): Growth and some physiological aspects of *Nostoc muscorum* in response to mixtures of two triazine herbicides. Bull. Environ. Contam. Toxicol., 54 : 273-280.

Shehata, S.A.; Aly, O.A. and Abou-Waly, H.F. (1984): Effect of bladex, etazine, dicryl and baylucide on the growth of *Scenedesmus*. Environ. Int., 10: 225-234.

Shehata, S.A.; El-Dib, M.A. and Abou-Waly, H.F. (1997): Effect of certain herbicides on the growth of freshwater algae. Water, Air and Soil Pollution, 100: 1-12.

- Shtina, E.A. and Dorochova M.F. (1983):** Principles and methods of soil algae use for bioindication of soil pollution. In (Methods in Ecotoxicology), 47-52.
- Sikka, H.C. and Pramer, D. (1968):** Physiological effects of fluometuron on some unicellular algae. *Weed Science*, 16: 296-299.
- Singh, R.H.; Singh, B.D. and Singh, H.N. (1983):** Inhibition of photosystem II of nitrogen-fixing blue-green alga *Nostoc linckia* by the rice-field herbicide benthocarb. *Zeitschrift fur Allgemeine Mikrobiologie*, 23 (7): 435-441.
- Singh, L.J. and Tiwari, D.N. (1988a):** Effects of selected rice-field herbicides on photosynthesis, respiration, and nitrogen assimilating enzyme systems of paddy soil diazotrophic Cyanobacteria. *Pestic. Biochem. Physiol.*, 31: 120-128.
- Singh, L.J. and Tiwari, D.N. (1988b):** Some important parameters in the evaluation of herbicide toxicity in diazotrophic Cyanobacteria. *Journal of applied Bacteriology*, 64: 365-376.
- Smith, G. M. (1950):** The fresh water algae of the United States 2nd ed. New York, McGraw-Hill Book ,co., 719 pp.
- Smith, L. L. (1988):** The toxicity of paraquat. *Adv. Drug. React. Ac. Poison Rev.* 1, 1-17.
- Sodergren, A. (1971):** Accumulation and distribution of chlorinated hydrocarbons in the cultures of Chlorophyceae. *Oikos*, 22: 215-220.
- Soliman, A.I. (1984):** Effect of some herbicides on photosynthesis and nitrogen metabolism of some green algae. Ph.D. Thesis, Faculty of Science, Mansoura University, Egypt.
- Soliman, A.I.; Sami, A.S.D.; Mansour, F.A. and Hussein, M.H. (1993):** Effect of butachlor on growth, pigmentation and nitrogen fixation by *Nostoc kihlmani* and *Anabaena oscillarioides*. *Phykos*, 32: 85-93.
- Somasundaram, L.; Racke, K.D. and Coats, J.R. (1987):** Effect of manuring on persistence and degradation of soil insecticides. *Bull. Environ. Contam. Toxicol.*, 39: 579-586.

- Spawn, R.L.; Hoagland, K.D. and Siegfried, B.D. (1997):** Effects of alachlor on an algal community from a midwestern agricultural stream. *Environ. Toxicol. Chem.*, 16(4) : 785-793.
- Stainer, R.Y.; Kunisawa, R.; Mandel, M. and Cohen-Bazire, G. (1971):** Purification and properties of unicellular blue-green algae (order Chroococcales). *Bacteriological Reviews*, 35: 171-205.
- Steel, R.G. and Torrie, J.H. (1960):** Principles and procedures of statistics with special reference to biological science. Mc Graw Hill, NY.
- Stewart, W.D.P.; Fitzgerald, G.P. and Burris, R.H. (1967):** In situ studies on N₂ fixation using the acetylene reduction technique. *Proceedings of the National Academy of Science, USA*, 58: 2071.
- Stratton, G.W. (1984):** Effects of herbicides atrazine and its degradation products, alone and in combination, on phototrophic microorganisms. *Arch. Environ. Contam. Toxicol.*, 13: 35-42.
- Swain, N.; Rath, B. and Adhikary, S.P. (1994):** Growth response of the Cyanobacterium *Microcystis aeruginosa* to herbicides and pesticides. *J. Basic Microbiol.*, 34(3): 197-204.
- Tang, J.; Hoagland, K.D. and Siegfried, B.D. (1997):** Differential toxicity of atrazine to selected freshwater algae. *Bull. Environ. Contam. Toxicol.*, 59: 631-637.
- Tarar, J.L. and Shewale, T.H. (1984):** Studies on the effects of some fungicides on soil algae of paddy field. *Phykos*, 23(1&2): 191-201.
- Tiffany, L.H. and Britton, M.E. (1971):** The Algae of Illinois. Hafner Publishing Company, Inc. New York, 383 pp.
- Tiwari, D.N.; Singh, L.J. and Mishra, A.K. (1985):** Evidence for a reversible action of methonine sulfoximine during growth of the Cyanobacterium *Gloeotrichia ghosei* Singh. *New Physiol.*, 99: 361.
- Tomisek, A.; Reid, M.R.; Short, W.A. and Skipper, H.E. (1957):** Studies on the photosynthesis reaction. III. The effects of various inhibitors upon growth and carbon-fixation in *Chlorella pyrenoidosa*. *Plant physiology*, 32(1): 7-10.

- Tomlin, C. (1994):** The Pesticide Manual, Incorporating The agrochemicals Handbook. (Tenth ed.) The British Crop Protection Council and The Royal Society of Chemistry.
- Torres, A. M. and O'Flaherty, L. (1976):** Influence of pesticides on *Chlorella*, *Chlorococcum*, *Stigoclonium* (Chlorophyceae), *Tribonema*, *Vaucheria* (Xanthophyceae) and *Oscillatoria* (Cyanophyceae). *Phycology*, 15: 25-36.
- Tubea, B.; Hawxby, K. and Mehta, R. (1981):** The effects of nutrient, PH and herbicide levels on algal growth. *Hydrobiologia*, 79:222-227.
- Vaishampayan, A.; Singh, H.R. and Singh, H.N. (1978):** Biological effects of rice-field herbicide Stam F-34 on various strains of the nitrogen-fixing blue-green alga *Nostoc muscorum*. *Biochem. physiol. pflanzen.*, 173: 410-419.
- Valentine, J.P. and Bingham, S.W. (1974):** Influence of several algae on 2,4-D residues in water. *Weed Sci.*, 22: 358-363.
- Vance, B.D. and Drummond, W. (1969):** Biological concentration of pesticides by algae. *J. Amer. Water Works Assoc.*, 61: 360.
- Vance, B.D. and Smith, D.L. (1969):** Effects of five herbicides on three green algae. *Texas journal of science*, 20: 329-337.
- Venkataraman, G. S. and Rajyalakshmi, B. (1971):** Tolerance of blue-green algae to pesticides. *Curr. Sci.*, 30: 143-144.
- Walsh, E. G. and Grow, T. E.(1971):** Depression of carbohydrate in marine algae by urea herbicides. *Weeds Sci.*, 19: 568-570.
- Wedding, R.T.; Erickson, L.C. and Brannaman, B.L. (1954):** Effect of 2,4-dichlorophenoxyacetic acid on photosynthesis and respiration. *Pl. Physiol. Lancaster*, 29: 64-69.
- Wegener, K.E.; Aldag, R. and Meyer, B. (1985):** Soil algae: Effects of herbicides on growth and C₂H₂ reduction (Nitrogenase) activity. *Soil Biol. Biochem.*, 17(5): 641-644.
- Wei, L.; Yu, H.; Sun, y.; Fen, J. and Wang, L. (1998):** The effects of three sulfonylurea herbicides and their degradation products on the green algae *Chlorella pyrenoidosa*. *Chemosphere*, 37(4): 747-751.

- Wessels, J.S.C. and Van der Veen, R. (1956):** The action of some derivatives of phenylurethan and 3-phenyl-1,1- dimethyl urea on the Hill reaction. *Biochim. et Biophys. Acta.*, 19: 548-549.
- Whitton, B. A.; Rother, J.A. and Paul, A.R. (1988):** Ecology of deepwater rice-fields in Bangladesh.2. Chemistry of sites at Manikganj and Sonargaon. *Hydrobiologia*. 169: 23-31.
- Wilkinson, R.E. and Smith, A.E. (1975):** Thiocarbamate inhibition of fatty acid biosynthesis in isolated spinach chloroplasts. *Weed Sci.*, 23: 100-104.
- Wolf, F.T. (1962):** Growth inhibition of *Chlorella* induced by 3-amino-1,2,4-triazole and its reversal by purines. *Nature*, 193: 901-902.
- Woods and Mellon (1941):** Chlorostannous reduced molybdophosphoric blue color method in sulfuric acid system. In "Soil Chemical Analysis " by Jackson, M.L. 1958, Prentice - Hall International ,Inc., London.
- Wright, S.J.L. (1978):** Interaction of pesticides with microalgae, in "Pesticide Microbiology" (I.R. Hill and S.J.L. Wright, Eds.), pp. 535-602, Academic Press, New York / London.
- Wright, S.J.L. (1972):** The effect of some herbicides on the growth of *Chlorella pyrenoidosa*. *Chemosphere*, 1: 11-14.
- Witty, J.F.; Keay, P.J.; Frogatt, P.J. and Dart, P.J. (1979):** Algal nitrogen fixation on temperate arable fields. The Broadbalk experiment. *Plant Soil*, 52: 151-164.
- Yoo, R.S. (1979):** Characterization of algal growth and phytoplankton succession in response to thiocarbamate herbicides with particular emphasis on benthocarb[S-4-chlorobenzyl)N,N diethylthiolcarbamate]. Ph.D. Dissertation, Univ. of California at Davis, 323pp.
- Yoshio, I. (1974):** Saturn (benthocarb), a new selective herbicide. *Jap. Pest. Inform.*, 19: 21.
- Zargar, M.Y. and Dar, G.H. (1990):** Effect of benthocarb and butachlor on growth and nitrogen fixation by Cyanobacteria. *Bull. Environ. Contam. Toxicol.*, 45: 232-234.