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- Abdul-Baki, A. A.
1980. Biochemical aspects of seed vigor. *HortSci* 15:765-771
- Abdul-Baki, A.A., and Anderson, J. D.
1970. Viability and leaching of sugars from germinating barley. *Crop Sci.* 10 31-34.
- Abdul-Baki, A.A., and Anderson, J.D.
1973. Vigor determination in soybean seed by multiple criteria. *Crop Sci.* 13 630-633.
- Abeles, F.B.
1967. Mechanism of action of abscission accelerators. *Physiol. Plant* 20:442-454.
- Abeles, F.B.
1969. Abscission. Role of cellulase. *Plant Physiol* 44:447-452.
- Abeles, F.B.
1973. Ethylene in Plant Biology. Acad. Press, New York and London. pp. 302.
- Abeles, F.B.; Craker, L.E.; and Leather, G.R.
1971a. Abscission: The phytoherontological effects of ethylene. *Plant Physiol.* 47:7-9
- Abeles, F.B.; Holm, R.E.; and Gahagan, H.E.
1968. Abscission. Induction of degradative enzymes during aging. *In* Biochemistry and Physiology of Plant Growth Substances, F. Wightman and G. Setterfield, (eds.), pp. 1515-1523. The Runge Press Ltd., Ottawa, Canada
- Abeles, F.B., and Leather, G.R.
1971. Abscission: Control of cellulase secretion by ethylene. *Planta* 97:87-91.
- Abeles, F.B.; Leather, G.R., Forrence, L.E.; and Craker, L.E.
1971b. Abscission: Regulation of senescence, protein synthesis, and enzyme secretion by ethylene. *HortSci* 6:371-376
- Acevedo, E.; Hsiao, T.C., and Henderson, D.W.
1971. Immediate and subsequent growth responses of maize leaves to changes in water status. *Plant Physiol.* 48:631-636.
- Ackerson, R.C.
1980. Stomatal response of cotton to water stress and abscisic acid as affected by water stress history. *Plant Physiol.* 65:455-459.
- Ackerson, R.C.
1981. Osmoregulation in cotton in response to water stress. II. Leaf carbohydrate status in relation to osmotic adjustment. *Plant Physiol* 67:489-493.
- Ackerson, R.C.
1982. Synthesis and movement of abscisic acid in water-stressed cotton leaves. *Plant Physiol.* 69:609-613
- Ackerson, R.C., and Hebert, R.R.
1981. Osmoregulation in cotton in response to water stress. I. Alteration in photosynthesis, leaf conductance, translocation, and ultrastructure. *Plant Physiol* 67:484-488.
- Ackerson, R.C., and Krieg, D.R.
1977. Stomatal and non-stomatal regulation of water use in cotton, corn, and sorghum. *Plant Physiol.* 60:850-853.
- Ackerson, R.C., Krieg, D.R., Haring, C.L.; and Chang, N.
1977. Effects of plant water status on stomatal activity, photosynthesis and nitrate reductase activity of field grown cotton. *Crop Sci* 17:81-84
- Ackerson, R.C., and Radin, J.W.
1983. Abscisic acid accumulation in cotton leaves in response to dehydration at high pressure. *Plant Physiol.* 71:432-433.
- Adams, D.O., and Yang, S.F.
1979. Ethylene biosynthesis. Identification of 1-amino-cyclopropane-1-carboxylic acid as an intermediate in the conversion of methionine to ethylene. *Proc. Natl. Acad. Sci.* 76 170-174.

- Adedipe, N.O., and Fletcher, R.A.
1971. Retardation of leaf senescence by benzyladenine in bean plants is not dependent on mobilization. *Can. J. Bot.* 49:59-61.
- Addicott, F.T.
1969. Aging, senescence, and abscission in plants. *Phyto gerontology. HortSci* 4:114-116.
- Addicott, F.T.
1970. Plant hormones in the control of abscission. *Biol. Rev. Cambridge Phil. Soc.* 45:485-524.
- Addicott, F.T., Carns, H.R.; Lyon, J.L.; Smith, O.E.; and McMeans, J.L.
1964. On the physiology of abscisins. *In* J.P. Nitsch, (ed.), *Regulateurs Naturels de la Croissance Vegetale*, pp. 687-703.
- Addicott, F.T., and Lynch, R.S.
1955. Physiology of abscission. *Ann. Rev. Plant Physiol.* 6:211-238.
- Addicott, F.T.; Lynch, R.S.; and Carns, H.R.
1955. Auxin gradient theory of abscission regulation. *Science* 121:644-645.
- Addicott, F.T., and Lyon, J.L.
1969. Physiology of abscisic acid and related substances. *Ann. Rev. Plant Physiol.* 20:139-164.
- Addicott, F.T., and Lyon, J.L.
1973. Physiological ecology of abscission. Chapter 3. *In* T.T. Kozlowski (ed.), *Shedding of Plant Parts*, pp. 85-124. Acad. Press, New York.
- Addicott, F.T., and Wiatr, S.M.
1977. Hormonal controls of abscission: Biochemical and ultra-structural aspects. *In* *Plant Growth Regulation*, P.E. Pilet (eds.), pp. 249-257. Springer-Verlag, Berlin.
- Agrawal, P.K.
1977. Germination, fat acidity and leaching of sugars from five cultivars of paddy (*Oryza sativa*) seeds during storage. *Seed Sci. and Technol.* 5:489-498.
- Ainsworth, S.K.; Neuman, R.E.; and McCormick, J.P.
1979b. *Chemotaxis and histamine releasing properties of compounds in cotton mill dust*. Proc. Beltwide Cotton Prod. Res. Conf. pp. 21-29.
- Ainsworth, S.K.; Neuman, R.E.; and Harley, R.A.
1979a. Histamine release from platelets for assay of byssinogenic substances in cotton mill dust and related materials. *Brit. J. Indust. Med.* 36:35-42.
- Aiyangar, G.S.
1951. Origin and development of lint and fuzz in cotton. *Ind. J. Agr. Sci.* 21:293-312.
- Akazawa, T.
1979. Ribulose 1,5-bisphosphate carboxylase, *In* *Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes*. pp. 208-299. (ed.) M. Gibbs and E. Latzko. *Encyclopedia of Plant Physiology*. Vol. 6. Springer-Verlag, NY.
- Akhtar, P., and Shaikat, S.S.
1976. Role of dew in the survival and phenology of *Gossypium hirsutum* cv. *Qalandri*. *Pak. J. Bot.* 8:151-155.
- Akita, S., and Moss, D.N.
1972. Differential stomatal response between C₃ and C₄ species to atmospheric CO₂ concentration and light. *Crop Sci.* 12:789-793.
- Akita, S., and Moss, D.N.
1973. Photosynthetic response to CO₂ and light by maize and wheat leaves adjusted for constant stomatal apertures. *Crop Sci.* 13:234-237.
- Akita, S., and Tanaka, I.
1973. Studies on the mechanism of differences in photosynthesis among species. IV. The differential response in dry matter production between C₃ and C₄ species to atmospheric carbon dioxide enrichment. *Proc. Crop Sci. Japan* 42:288-295.
- Albersheim, P.
1975. The walls of growing plant cells. *Sc. American*, n^o 4:81-95.

- Albersheim, P.; McNeil, M.; and Labavitch, J.M.
1977. The molecular structure of the primary cell wall and elongation growth. In "Plant Growth Regulation" (ed.), Pilet pp. 1-12
- Albersson, D.M.
1964. Materials handling—mechanical conveyors. In Handbook for Cotton Ginners, pp. 68-70. Agriculture Research Service, USDA. Agriculture Handbook No. 260.
- Ali, M., and Ullah, R.H.
1963. Oil content in cotton at various stages of boll development. Pakistan Cottons 1963:1-14.
- Al-Kawas, G M
1967. Growth and development of grain sorghum (*Sorghum vulgare*, Pers.) in an enclosed environment. MS Thesis, Dept. of Agronomy, University of Arizona, Tucson.
- Allaway, W G, and Mansfield, T A
1967. Stomatal responses to changes in carbon dioxide concentrations in leaves treated with 3-(4-chlorophenyl)-1,1-dimethylurea. New Phytol. 66:57-63
- Allaway, W G, and Mansfield, T A.
1970. Experiments and observations on the after effect of wilting on stomata of *Rumex sanguineus*. Can. J. Bot. 48:513-521.
- Allen, L H, Jr
1979. Potentials for carbon dioxide enrichment. In B.J. Barfield and J.F. Gerber (eds.), Modification of the Aerial Environment of Crops. pp. 500-519. American Society of Agricultural Engineers, St. Joseph, Michigan.
- Allen, L.H., Jr., and Boote, K J
1981. Response of Vegetation to Carbon Dioxide. Progress Report of Research: Effects of Increased Carbon Dioxide on Photosynthesis and Agricultural Productivity of Soybeans. No. 003. Agronomy Department, University of Florida, Gainesville, Florida. Joint Program of the U.S. Department of Energy and the U.S. Department of Agriculture. pp. 131.
- Allen, L H, Jr; Jensen, S E, and Lemon, E.R
1971. Plant response to carbon dioxide enrichment under field conditions: A simulation. Science 173:256-258
- Altschul, A M
1948. Biological processes of the cottonseed. In A.E. Bailey (ed.), Cottonseed and Cottonseed Products, Interscience Publishers, Inc., NY. pp. 157-212
- Altschul, A.M.
1964. Seed Proteins. In H W. Schultz and H.F. Anglemier (eds.), Symposium of Food Proteins and Their Reaction. Avi Publishing Co., Inc., Westport, Conn.
- American Oil Chemists' Society.
1976. Official and tentative methods. The Society: Chicago, Ill.
- Ames, R.B.
1981. Status of HARVADE 5F as a cotton defoliant. Proc. Beltwide Cotton Prod. Res. Conf. pp. 71-72.
- Amin, J.V
1969. Some aspects of respiration and respiration inhibitors in low temperature effects on the cotton plant. Physiol. Plant 22:1184-1191
- Amin, J.V., and Joham, H E
1960. Growth of cotton as influenced by low substrate molybdenum. Soil Sci. 89:101-107.
- Ammirato, P V
1974. The effects of abscisic acid on the development of somatic embryos from cells of caraway (*Carum carvi* L.) Bot. Gaz. 135:328-337
- Andersen, A.M., Hart, J.R.; and French, R C
1964. Comparison of germination techniques and conductivity tests of cotton seeds. Proc. Int. Seed Test Assoc. 29:81-96.

- Anderson, A.S.
1976. Regulation of apical dominance by ethephon, irradiance and CO₂. *Physiol. Plant.* 37:303-308.
- Anderson, A.S., and Muir, R.M.
1969. Gibberellin induced changes in diffusible auxins from savoy cabbage. *Physiol. Plant.* 22:354-363
- Anderson, D.B., and Kerr, T.
1938. Growth and structure of cotton fiber. *Ind. Eng. Chem.* 30:48-54.
- Anderson, D.B., and Kerr, T.
1943. A note on the growth behavior of cotton bolls. *Plant Physiol.* 18:261-269.
- Anderson, J.M.
1981. Consequences of spatial separation of photosystem 1 and 2 in thylakoid membranes of higher plant chloroplasts. *FEBS Ltrs.* 124:1-9.
- Anderson, L.E.
1979. Interaction between photochemistry and activity of enzymes. *In* M. Gibbs and E. Latzko (eds.), *Encyclopedia of Plant Physiology, New Series, Vol 6*, pp. 271-281. Springer-Verlag, Berlin.
- Anderson, M.C.
1975. Solar radiation and carbon dioxide in the plant communities—conclusions. Chapter 15. *In* J.P. Cooper (ed.), *Photosynthesis and Productivity in Different Environments. International Biological Programme No. 3*, pp. 345-354. Cambridge Univ. Press, pp. 715.
- Anderson, O.C., and Worthington, R.E.
1971. Boron and manganese effects on protein, oil content, and fatty acid composition of cottonseed. *Agron. J.* 63:566-569.
- Anderson, O.E., and Boswell, F.C.
1968. Boron and manganese effects on cotton yield, lint quality, and earliness of harvest. *Agron. J.* 60:488-493.
- Anderson, W.K.
1971a. Responses of five cotton varieties to two field soil temperature regimes at emergence. *Cotton Grow. Rev.* 48:42-50.
- Anderson, W.K.
1971b. Methods of measuring and relationships between some growth characters of cotton. *Cotton Grow. Rev.* 48:51-59.
- Andreeva, T.F.; Avdeeva, T.A.; Vlasova, M.P.; Thyok, N.T.; and Nichiporovich, A.A.
1971. Effect of nitrogen nutrition of plants on structure and function of the photosynthetic apparatus. *Fiziol. Rast.* 18:701-707
- Anonymous.
1918. Relation of oil content to rainfall. *Cotton Oil Press.* 2:44-45.
- Anter, F.; Rasheed, M.A.; El-Salam, A. Abd; and Metwally, A.I.
1976a. Effect of foliar application of certain micronutrients on fiber qualities of cotton. I. Application of copper, zinc, molybdenum and boron. *Ann. Agric. Sc. (Moshtohor)* 6:303-311.
- Anter, F.; Rasheed, M.A.; El-Salam, A. Abd; and Metwally, A.I.
1976b. Effect of foliar application of certain micronutrients on fiber qualities of cotton. II. Iron and manganese. *Ann. Agric. Sc. (Moshtohor)* 6:312-319.
- Antony, A.K., and Kutty, K.E.
1975. Effect of soil and climatic conditions on yield and fibre properties of improved strains of upland cotton. *Ind. J. Agr. Sci.* 45:199-203.
- Aoki, M., and Yabuki, K.
1977. Studies on the carbon dioxide enrichment for plant growth. VII. Changes in dry matter production and photosynthetic rate of cucumber during carbon dioxide enrichment. *Agr. Meteorol.* 18:475-485.
- Apel, P.
1976. Grain growth and carbohydrate content in spring wheat at different CO₂ concentrations. *Biochem. Physiol. Pflanzen.* 169:355-362.

- Archibald, R.G.
1927. Sulfuric acid treatment of cottonseed. *Soil Sci.* 23:1-3.
- Arle, H.F.
1976. Conditioning cotton for defoliation. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 49
- Arndt, C.H.
1937. Water absorption in the cotton plant as affected by soil and water temperature. *Plant Physiol.* 12:703-720.
- Arndt, C.H.
1945a. Viability and infection of light and heavy cotton seeds. *Phytopath.* 35:747-753
- Arndt, C.H.
1945b. Temperature-growth relation of the roots and hypocotyls of cotton seedlings. *Plant Physiol.* 20:200-219.
- Arnison, P.G.
1980. A redox model of the mechanism of action of Indole Acetic Acid (auxin) and other plant growth regulators. *Spec. in Sci. and Techn.* 3:5-15.
- Arnon, I.
1972. Cotton. Chapter 7. *In Crop Production in Dry Regions. Vol. II. Systematic Treatment of the Principal Crops.* Leonard Hill, London. pp. 261-344.
- Arntzen, C.J.
1978. Dynamic structural features of chloroplast lamellae. *In D.R. Sanadi and L.P. Vernon (eds.), Current Topics in Bioenergetics, Vol. 8,* pp. 111-160. Academic Press, NY.
- Arntzen, C.J., and Briantais, J.M.
1975. Chloroplast structure and function. *In Govindjee (ed.), Bioenergetics of Photosynthesis,* pp. 51-113. Acad. Press, NY.
- Arteca, R.N., Pooviah, B.W., and Smith, O.E.
1979. Changes in carbon fixation, tuberization, and growth induced by CO₂ application to the root zone of potato plants. *Science* 205:1279-1280.
- Ashley, D.A.
1972. ¹⁴C-labeled photosynthate translocation and utilization in cotton plants. *Crop Sci.* 12:69-74
- Ashley, D.A., Doss, B.D., and Bennett, O.L.
1965. Relation of cotton leaf area index to plant growth and fruiting. *Agron. J.* 47:61-64
- Ashley, D.A., and Goodsen, R.D.
1972. Effect of time and plant K status on ¹⁴C-labeled photosynthate movement in cotton. *Crop Sci.* 12:686-690.
- Associated Seed Growers, Inc.
1942. A study of mechanical injury to seed beans. Associated Seed Growers, Inc., New Haven, Conn. *Asgrow Monograph No. 1.*
- Association of Official Seed Analysts.
1976. Progress report on the seed vigor testing handbook. *Assoc. Off. Seed Anal. NewsLetter* 50:1-78.
- Association of Official Seed Analysts
1978. Rules for testing seed. *Jour. Seed Tech.* 3:1-126
- Association of Official Seed Analysts
1981. Rules for testing seed. *Jour. Seed Tech.* 6:1-126.
- Association of Official Seed Analysts
1983. Seed vigor testing handbook. *Contr. No. 32.* pp. 1-88.
- Atkin, J.C.
1957. Bean seed injury and germination. *NY Agr. Exp. Sta. Farm Research.* April, 1957. pp. 10-11.
- Attiwill, P.M.
1971. Atmospheric carbon dioxide and the biosphere. *Environ. Pollut.* 1:249-261.
- Aung, L.H.
1974. Root-shoot relationships. *In E.W. Carson (ed.) The Plant Root and Its Environment.* pp. 29-63. University Press of Virginia

Ayers, R.S., and Westcot, D.W.

1977. Water quality for agriculture. Proc. Int. Conf. on Managing Saline Water for Irrigation Planning for the Future. pp 400-430.

Ayyangar, G.S.

1948. Some observations on stomata found on cotton ovules. Ind. Cotton Rev. (Bombay) 2:187-192.

Azcon-Bieto, J.; Farguhar, G.D.; and Caballero, A.

1981. Effects of temperature, oxygen concentration, leaf age and seasonal variations on the CO₂ compensation point of *Lotium perenne* L.: Comparison with a mathematical model including non-photorespiratory CO₂ production in the light. Planta. 152:497-504.

B

Babaev, D., and Agakishiev, D

1977. Natural regulators of fine-fibered cotton seeds. Izv. Akad. Nauk.; Turkm. SSR Ser. Biol. Nauk. 71-74.

Backhaus, R.; Jones, D.A., and Kimball, B A.

1979. The influence of CO₂ fertilization on seedling growth in guayule HortSci. 14:463-464.

Baert, T.; De Langhe, E.; and Waterkeyn, L.

1975. *In vitro* culture of cotton ovules. III. Influence of hormones upon fiber development. La Cellule, 71:55-63.

Baes, C.F., Jr.; Goeller, H.E.; Olson, J.S.; and Rotty, R.M.

1976. The Global Carbon Dioxide Problem. ORNL-5194. Oak Ridge National Laboratory, Knoxville, TN. pp 78.

Bahr, J.T., and Jensen, R.G.

1978. Activation of ribulose biphosphate carboxylase in intact chloroplasts by CO₂ and light. Arch. Biochem. Biophys. 185:39-48.

Bailey, A.V.; Harris, J.A.; and Skau, E L.

1966. Cyclopropanoid fatty acid content and fatty acid composition of crude oils from twenty-five varieties of cottonseed. J. Amer. Oil Chem. Soc. 43:107-110.

Bailey, C.J., and Boulter, D.

1970. The structure of legumin, a storage protein of broad bean (*Vicia faba*) seed. Eur. J. Biochem. 17:460-466

Bailey, W A.; Klueter, H.H.; Krizek, D.T.; and Stuart, N.W.

1970. CO₂ systems for growing plants. Transactions Amer. Soc. Ag. Eng. 13:263-268.

Baker, D.N.

1965. Effects of certain environmental factors on net assimilation in cotton. Crop Sci. 5:53-56.

Baker, D.N

1966. "Microclimate in the Field." Trans. ASAE 9:77-84.

Baker, D.N.; Allen, L.H. Jr.; and Lambert, J.R.

1981. Effects of increased CO₂ on photosynthesis and agricultural productivity. In Carbon Dioxide Effects Research and Assessment Program 013. Vol. 2. U.S. Dept. of Energy, Office of Environment.

Baker, D.N.; Bruce, R.R.; and McKinion, J.M.

1973. An analysis of the relation between photosynthetic efficiency and yield of cotton. Proc. 1973 Beltwide Cotton Res. Conf. pp. 110-114.

Baker, D.N., and Enoch, H.Z.

1982. Plant growth and development. In Proceedings of an International Conference on Rising Atmospheric Carbon Dioxide and Plant Productivity. Athens, Georgia, May 23-28, 1982. American Association for the Advancement of Science.

Baker, D.N., and Hesketh, J.D.

1969. Respiration and the carbon balance in cotton. Proc. Cotton Phys. Conf. pp. 60-64.

- Baker, D.N.; Hesketh, J.D.; and Duncan, W.G.
1972. "The Simulation of Growth and Yield in Cotton" I. Gross Photosynthesis, respiration and growth. *Crop Sci.* 12 431-435.
- Baker, D.N.; Hesketh, J.D.; and Weaver, R.E.C.
1978. Crop architecture in relation to yield. *In Crop Physiology—U.S. Gupta (ed.)*, Oxford and IBH Publishing Co., New Delhi.
- Baker, D.H.; Lambert, J.R., and McKinion, J.M.
1983 Gossym: A simulator of cotton growth and yield. *South Carolina Agr. Exp. Sta. Bull.* 1089. pp. 134.
- Baker, D.N.; Lambert, J.R.; Phene, C.J.; and McKinion, J.M.
1976 "GOSSYM. A Simulator of Cotton Crop Dynamics." *In Computers Applied to the Management of Large-Scale Agricultural Enterprises*. Proc. U.S.—U.S.S.R. Seminar. Moscow, Riga, Kishiniev, pp. 100-133.
- Baker, D.N.; Landivar, J.A., and Lambert, J.R.
1979a "Model Simulation of Fruiting." *Proc. Cotton Prod. Res. Conf. Phoenix, Az.* pp. 261-263.
- Baker, D.N., Landivar, J.A.; Whisler, F.D., and Reddy, V.R.
1979b. "Plant Responses to Environmental Conditions and Modeling Plant Development." *Weather and Agr. Symp., Kansas City, MO.*, pp. 69-135 Oct. 1-2.
- Baker, D.N., and McKinion, J.
1971. Annual report Boll Weevil Research Laboratory Soil and Water Conservation Research Division, Starkville, Mississippi.
- Baker, D.N., and Meyer, R.E.
1966. Influence of stand geometry on light interception and net photosynthesis in cotton. *Crop Sci.* 6:15-19.
- Baker, D.N., and Myhre, D.L.
1968. Leaf shape and photosynthetic potential in cotton. *Proc. 19th Cotton Phys. Conf.* pp. 57-70.
- Baker, D.N., and Myhre, D.L.
1969. Effects of leaf shape and boundary layer thickness on photosynthesis in cotton (*Gossypium hirsutum*). *Physiol. Plant* 22:1043-1049
- Baker, T.S., Eisenberg, D., and Eisenberg, F.
1977. Ribulose biphosphate carboxylase: A two-layered square-shaped molecule of symmetry 422. *Science* 196:293-295.
- Ballard, W.W.
1925. Behavior of cotton planted at different dates in weevil control experiments in Texas and South Carolina USDA Bul. No. 1320.
- Balls, W.L.
1915 *The Development and Properties of Raw Cotton*. A.C. Black. Ltd. London
- Balls, W.L.
1919a. *The Cotton Plant in Egypt*. MacMillan and Co., London. pp. 202.
- Balls, W.L.
1919b. The existence of daily growth rings in the cell wall of cotton hairs. *Proc. Roy. Soc. London B* 95:72-89.
- Baluch, Z.A.M.
1979 *In vitro* anther culture of *Gossypium* species. *Pakist. Cottons* 23:161-163
- Bamann, E., and Ullmann, E.
1940. Untersuchungen über die Lipase höherer Pflanzen *Biochem. Z.* 312:9-40.
- Baranov, P.A., and Maltzev, A.M.
1937. The structure and development of the cotton plant. Laboratory of cytology and anatomy of the central plant Breeding Station Moscow-Leningrad
- Barber, J.
1977. *Primary Processes of Photosynthesis* Elsevier Publishing Co., Amsterdam.

- Barlow, P.
1970. Vacuoles in the nucleoli of *Zea Mays* root apices and their possible significance in nucleolar physiology. *Caryologia* 23, 61.
- Barritt, N.W.
1929. The structure of the seed coat in *Gossypium* and its relation to the growth and nutrition of lint hairs. *Ann. Bot.* 42:483-489.
- Barrow, J.R., and Davis, D.D.
1974. G1₂—A new allele for pigment glands in cotton. *Crop Sci.* 14:325-327.
- Barrow-Agee Laboratories, Inc.
1918. Rainfall and oil content. *Cotton Oil Press* 2:44-45.
- Barrow, J.R.
1977. The cytology of callus tissue produced from cotton anthers. *Agron. Abstr.* pp. 49.
- Barrow, J.R.
1984. The conditions required to isolate and maintain viable cotton microspores. *Gossypium hirsutum* L.
- Barrow, J.R.; Katterman, F.R.; and William, D.
1978. Haploid and diploid callus from cotton anthers. *Crop Sci.* 18 619-622.
- Bartee, S.N., and Krieg, D.R.
1974. Cottonseed density: Associated physical and chemical properties. *Agron. J.* 66:433-435.
- Bartkowski, E.J.; Katterman, F.R.H.; and Buxton, D.R.
1978. Influence of exogenous fatty acids on cottonseed germination. *Physiol. Plant* 44:153-56.
- Baskin, C.C.
1976a. Seed cotton storage and planting seed quality. *Cotton Gin and Oil Mill Press* 77.17, 24.
- Baskin, C.C.
1976b. Seed cotton storage and planting seed quality. In *Summary Proceedings Seed Cotton Handling Seminar*, Cotton Incorporated, Raleigh, N.C. pp. 911
- Baskin, C.C.
1976c. The effects of modular storage of seed cotton on planting seed quality. Terminal Report to Cotton Incorporated. pp. 20.
- Baskin, C.C.
1979. Germination test is not enough. *Proc. Beltwide Cotton Prod. Mech. Conf.* pp. 53-54.
- Baskin, C.C.
1981a. Storage of seed cotton and bulk cottonseed for planting purposes. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 306-311
- Baskin, C.C.
1981b. Tetrazolium test for evaluation of cottonseed. *Proc. Beltwide Cotton Prod. Res. Conf.* 1981: pp. 312.
- Baskin, C.C.
1981c. Tetrazolium test. In *Association of Official Seed Analyst Vigor Testing Handbook*, contribution No. 32 to the handbook on seed testing.
- Baskin, C.C.; Bryson, C.P.; and Rushing, K.W.
1972. Harvest high quality cottonseed. *Miss. Coop. Ext. Ser. Inf. Sheet* 527 (2M-7-72).
- Bassett, D.M.; Anderson, W.D.; and Werkhoven, C.H.E.
1970. Dry matter production and nutrient uptake in irrigated cotton (*Gossypium hirsutum* L.). *Agron. J.* 62:299-303.
- Bassham, J.A.
1977. Increasing crop production through more controlled photosynthesis. *Science* 197:630-638.
- Bassham, J.A.
1979. The reductive pentose phosphate cycle and its regulation, pp. 9-30. In *Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes*. M. Gibbs and E. Latzko. (eds.), *Encyclopedia of Plant Physiology*. Vol. 6. Springer-Verlag, N.Y.

- Bassham, J.A., and Calvin, M.
1957 The Path of Carbon in Photosynthesis Prentice-Hall, Inc., N.J.
- Bates, G.H.
1937. Advice for the observation of root growth in the soil. *Nature (Lon.)* 139:966-967
- Baur, A.H., Yang, S.F.; Pratt, H.K.; and Biale, J.B.
1971. Ethylene biosynthesis in fruit tissues. *Plant Physiol.* 47:696-699.
- Bazanova, T.B.
1966. Effect of gibberellins on the growth and yield of cotton growth under different nutrient regimes. *Izv Akad Nauk. Turkmen. SSR Ser. Biol. No.* 1:79-82.
- Bazanova, T.B.
1977. Effect of cycloaliphatic compounds upon the growth and auxin-inhibiting activity of fine-fibre cotton with regard to the type of nitrogen nutrition. *Proc. Acad. Sci. Turk SSR Ser Biol. Sci.* 1:11-17
- Beal, J.M.
1928. A study of heterotypic prophase in the microsporogenesis of cotton. *Cellule* 38:245-268.
- Beardsell, M.F., and Cohen, D.
1975. Relationships between leaf water status, abscisic acid levels and stomatal resistance in maize and sorghum. *Plant Physiol.* 56:207-212.
- Beasley, C.A.
1971. *In vitro* culture of fertilized cotton ovules. *Bioscience*, 21:906-907.
- Beasley, C.A.
1973. Hormonal regulation of growth in unfertilized cotton ovules. *Science* 197:1003-1005.
- Beasley, C.A.
1974. Glasshouse production of cotton flowers, harvest procedures, methods of ovule transfer, and *in vitro* development of immature seed. *Cotton Grow. Rev.* 51:293-301.
- Beasley, C.A.
1977a. Temperature dependent response to indolacetic acid is altered by NH_4^+ in cultured ovules. *Plant Physiol.* 59:203-206
- Beasley, C.A.
1977b. Ovule culture. Fundamental and pragmatic research for the cotton industry. *Plant Cell, Tissue and Organ Culture.* Springer-Verlag pp. 160-178
- Beasley, C.A.
1979. Cellulose content in fibers of cottons which differ in their lengths and extent of fuzz. *Physiol. Plant* 45:77-82.
- Beasley, C.A., and Ting, I.P.
1971. Development of procedures for *in vitro* culture of cotton ovules. *Beltwide Cotton Prod. Res. Conf.* pp. 48.
- Beasley, C.A., and Ting, I.P.
1973. The effects of plant growth substances on *in vitro* fiber development from fertilized cotton ovules. *Amer. J. Bot.* 60:130-139
- Beasley, C.A., and Ting, I.P.
1974. Effects of plant growth substances on *in vitro* fiber development from unfertilized cotton ovules. *Amer. J. Bot.* 61:188-194.
- Beasley, C.A., Ting, I.P., and Feign, L.A.
1971. Test tube cotton. *California Agriculture* 25:6-8.
- Beasley, C.A., Ting, I.P.; Linkins, A.E.; Birnbaum, E.H.; and Delmer, D.P.
1974. Cotton ovule culture: A review of progress and a preview of potentiality. In: *Tissue Culture and Plant Science.* H.E. Street (ed.) Acad. Press, London-New York, pp. 169-192.
- Beasley, C.A., and Egh, E.
1977. Fiber production *in vitro* from a conditional fiberless mutant of cotton. *Devel. Biol.* 57:234-237.

- Beasley, C.A.; Egli, M.A.; Chane, S.R.; and Radin, J.W.
1979. Independent control of fiber development and nitrate reduction of cultured cotton ovules. *Plant Physiol.* 63:57-60.
- Beasley, J.O.
1940. Hybridization of American 26-chromosome and Asiatic 13-chromosome species of *Gossypium*. *J. Agr. Res.* 60:175-182.
- Beckett, R.E.
1927. Growth of fruiting parts in *Gossypium cernuum*, an Asiatic cotton. *J. Agr. Res.* 35:97-106.
- Beckett, R.E., and Hubbard, J.W.
1932. The shedding of 4-lock and 5-lock bolls in upland cotton. *USDA Tech. Bull.* 277.
- Beevers, H.
1979. Microbodies in higher plants. *Ann. Rev. Plant Physiol.* 30:159-193.
- Begg, J.E., and Turner, N.C.
1976. Crop water deficits. *Adv. Agron.* 28:161-217.
- Beier, R.C., and Greenblatt, G.A.
1981. A novel solvent strategy for Sep-Pak C₁₈ elution of hydrophobic compounds: Applications to lacimlenes and cadalenes from cotton bract. *J. Liq. Chromo.* 4:515-524.
- Beighley, D.H., and Hopper, N.W.
1981. The relationship of chemical composition and electrical conductivity of cowpea seed to field performance. *Agron. Abstr.* 1981:117.
- Bell, A.A.
1967. Formation of gossypol in infected or chemically irritated tissues of *Gossypium* species. *Phytopath.* 57:759-764.
- Bell, A.A.
1969. Phytoalexin production and *Verticillium* wilt resistance in cotton. *Phytopath.* 59:1119-1127.
- Bell, A.A.
1973. Nature of disease resistance. In *Verticillium Wilt of Cotton*, pp. 47-62. *USDA Publ. ARS-S-19*.
- Bell, A.A.
1981. Biochemical mechanisms of disease resistance. *Ann. Rev. Plant Physiol.* 32:21-81.
- Bell, A.A., and Christiansen, M.N.
1968. Gossypol synthesis in chilled cotton tissues. *Phytopath.* 58:883.
- Bell, A.A., and Stipanovic, R.D.
1977. The chemical composition, biological activity, and genetics of pigment glands in cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 244-258.
- Bell, A.A., and Stipanovic, R.D.
1978. Biochemistry of disease and pest resistance in cotton. *Mycopathologia* 65:91-106.
- Bell, A.A.; Stipanovic, R.D.; Howell, C.R.; and Fryxell, P.A.
1975. Antimicrobial terpenoids of *Gossypium*. Hemigossypol, 6-methoxyhemigossypol, and 6-deoxyhemigossypol. *Phytochem.* 14:225-231.
- Bell, A.A.; Stipanovic, R.D.; O'Brien, D.H.; and Fryxell, P.A.
1978. Sesquiterpenoid aldehyde quinones and derivatives in pigment glands of *Gossypium*. *Phytochem* 17:1297-1305.
- Benedict, C.R.
1984. Physiology. In R.J. Kohel and C.F. Lewis. *Cotton Amer. Soc. Agronomy Madison, WI.* pp. 151-200.
- Benedict, C.R.; McCree, K.J., and Kohel, R.J.
1972. High photosynthetic rate of a chlorophyll mutant of cotton. *Plant Physiol.* 49:968-971.
- Benedict, C.R., and Kohel, R.J.
1975. Export of ¹⁴C-assimilates in cotton leaves. *Crop Sci.* 15:367-372.
- Benedict, C.R.; Kohel, R.J.; and Schubert, A.M.
1976. Transport of ¹⁴C-assimilates to cottonseed: Integrity of funiculus during seed filling stage. *Crop Sci.* 16:23-27.

- Benedict, C.R.; Schubert, A.M.; and Kohel, R.J.
1980. Carbon metabolism in developing cottonseed. Sink demand and the distribution of assimilates. pp. 346-351. *In* Proc. Beltwide Cotton Prod. Res. Conf. St. Louis, MO.
- Benedict, C.R.; Smith, R.H.; and Kohel, R.J.
1973. Incorporation of ^{14}C -photosynthate into developing cotton bolls *Gossypium hirsutum* L. *Crop. Sci.* 13:88-91.
- Benedict, J.H., and Bird, L.S.
1981. Relationship of microorganisms within the plant and resistance to insects and diseases. Proc. Beltwide Cotton Prod. Res. Conf. pp. 149-150
- Bennett, J.H.
1969. Effects of ozone on leaf metabolism. Ph.D. Dissertation, University of Utah, pp. 96.
- Bennett, O.L.; Ashley, D.A.; and Doss, B.P.
1964. Methods of reducing soil crusting to increase cotton seedling emergence. *Agron. J.* 56:162-165.
- Bennett, O.L.; Erie, L.J.; and MacKenzie, A.J.
1967. Boll, fiber and spinning properties of cotton as affected by management practices. USDA Tech. Bull. 1372.
- Bennett, O.L.; Rouse, R.D.; Ashley, D.A.; and Doss, B.D.
1965. Yield, fiber quality and potassium content of irrigated cotton plants as affected by rates of potassium. *Agron. J.* 57:296-299.
- Berardi, L.C.; Martinez, W.H.; and Fernandez, C.F.
1969. Cottonseed protein isolates: Two step extraction procedure. *Food Technol.* 23:75-82.
- Berkey, D.A.
1974. Factors conditioning seed dormancy in cotton (*Gossypium hirsutum* L.) Ph.D. Dissertation. Mississippi State University, Miss. State, MS. pp. 53.
- Berkley, E.E.
1931. Studies of the effect of different lengths of day, with variations in temperature on vegetative growth and reproduction in cotton. *Ann. Mo. Bot. Gard.* 18:573-601.
- Berkley, E.E.
1949. Certain variations in the structure and properties of natural cellulose fibers. *Text. Res. Journ.* 19:363-367.
- Berkley, E.E., and Kerr, T.
1974. Structure and plasticity of Undried Cotton Fibers. *Ind. Eng. Chem.* 38 304-309.
- Berlin, J.D.
1970. The fine structure of cell wall formation in cotton fibers. 2nd Quarter Report, Cotton Producers Institute.
- Berlin, J.D.
1977. The fine structure of the non-fiber epidermal cell during cottonseed development. Proc. Beltwide Cotton Prod. Res. Conf. pp. 69.
- Berlin, J.D., Quisenberry, J.E.; McMichael, B.L.; Woodworth, M.; and Phillips, W.O.
1981a. Morphometric analysis of water stressed cotton leaves. Proc. Beltwide Cotton Prod. Res. Conf. 35.45.
- Berlin, J.D., and Ramsey, J.C.
1970. Electron microscopy of the developing cotton fiber. *In* C.J. Arceneaux (ed.), Proceedings of the 28th Annual Meeting of the Electron Microscope Society of America. Claitor's Publishing Division. Baton Rouge, La.
- Berlin, J., and Smutzer, G.
1976. An autoradiographic study of the outer epidermis of the cotton ovule. Proc. Beltwide Cotton Prod. Res. Conf. pp. 45.
- Berlin, J.D.; Worley, S.; Ramey, H.H., and Linkous, S.S.
1981b. Measuring the cross-sectional area of cotton fibers with an image analyzer. *Text. Res. J.* 51:109-113.

- Bernstein, L.
1955. Salt tolerance of field crops-cotton. U.S. Salinity Lab Rept. to Collaborators, Riverside, CA. pp. 37-41.
- Bernstein, L., and Hayward, H.E.
1958. Physiology of salt tolerance. *Ann. Rev. Plant Physiol.* 9:25-46.
- Berriman, L.P., and Benedict, H.M.
1963. Growth rings in cotton. *Text. Res. Journ.* 33:1926-1927.
- Berry, J.A.; Osmond, C.B.; and Lorimer, G.H.
1978. Fixation of $^{18}\text{O}_2$ during photorespiration. *Plant Physiol.* 62:954-967.
- Beutelmann, P., and Kende, H.
1976. The effect of senescence and ethylene on membrane-lipid levels in excised flower tissue of *Ipomoea tricolor*. *Plant Physiol.* 57S:97.
- Beyer, E.M., Jr., and Morgan, P.W.
1969. Ethylene modification of an auxin pulse in cotton stem sections. *Plant Physiol.* 44:1690-1694.
- Beyer, E.M., Jr., and Morgan, P.W.
1970. Effect of ethylene on the uptake, distribution, and metabolism of indoleacetic acid-1- ^{14}C -and-2- ^{14}C and naphthaleneacetic acid-1- ^{14}C . *Plant Physiol.* 46:157-162.
- Beyer, E.M., Jr., and Morgan, P.W.
1971. Abscission: The role of ethylene modification of auxin transport. *Plant Physiol.* 48:208-212.
- Bevan, M., and Northcote, D.H.
1981. Some rapid effects of synthetic auxins on mRNA levels in cultured plant cells. *Planta* 152:32-35
- Bhardwaj, S.N., and Dua, I.S.
1972. Physiology of boll shedding in cotton. VI. Evaluation of hormonal basis of varietal variation of boll shedding in American cotton (*Gossypium hirsutum* L.). *Indian J. Agric. Sci.* 42:300-307.
- Bhardwaj, S.N.; Dua, I.S.; and Nath, V.
1975. Boll-shedding in cotton—VII. Role of growth regulating substances. *Indian J. Plant Physiol.* 18:127-130.
- Bhardwaj, S.N., and Sharma, P.N.
1971. Influence of IAA and GA_3 on fibre properties and growth of cotton bolls. *Ind. J. Agric. Sci.* 41:524-527.
- Bhardwaj, S.N.; Sonthanam, V.; and Krishnamourthy, R.
1963. Influence of pretreating the seeds with NAA on yield and growth of cotton. *The Indian Cotton Grow Rev.* 17:5-11.
- Bhatt, J.G.; Raman, C.V.; Sankaranarayanan, T.G.; and Iyer, S.K.
1972. Changes in lint characters of cotton varieties by growth regulators. *Cotton Grow Rev.* 49:160-165.
- Bhatt, J.G., and Ramanujam, T.
1971. Some responses of a short-branch cotton variety to gibberellin. *Cotton Grow Rev.* 48:136-139.
- Bhojwani, S.S.; Power, J.B.; and Cocking, E.C.
1977. Isolation, culture and division of cotton callus protoplasts. *Plant Sci. Lett.* 8:85-89.
- Bianchini, J.P.; Rafalimanarivo, A.; and Gaydou, E.M.
1981. Determination of cyclopropanoic and cyclopropanoic fatty acids in cottonseed and kapok seed oils by gas-liquid chromatography. *Anal. Chem.* 53:2194-2201.
- Bidwell, R.G.S., and Turner, W.B.
1966. Effect of growth regulators on CO_2 assimilation in leaves, and its correlation with the bud break response in photosynthesis. *Plant Physiol.* 41:267-270.
- Bielorai, H., and Hopmans, P.A.M.
1975. Recovery of leaf water potential, transpiration and photosynthesis of cotton during irrigation cycles. *Agron. J.* 67:629-632.

- Bierhuizen, J.F., and Slatyer, R.O.
1964. Photosynthesis of cotton leaves under a range of environmental conditions in relation to internal and external diffusive resistances. *Aust. J. Biol. Sci.* 17:348-359.
- Bierhuizen, J.F., and Slatyer, R.O.
1965. Effect of atmospheric concentration of water vapour and CO₂ in determining transpiration and photosynthesis relationships in cotton leaves. *Agr. Meteor.* 2:259-270.
- Bilbro, J.D.
1962. Fruiting pattern, fiber properties and yields of three cotton varieties grown under three soil-moisture regimes on the High Plains of Texas, 1958. *Tex. Agr. Exp. Sta. MP-611:1-8.*
- Bilbro, J.D.
1974. Effect of pre-plant only irrigation on cotton yields. *Agron. J.* 66:833-834
- Bilbro, J.D.
1975. Relationship of air temperatures to first-bloom dates of cotton. *Tex. Agr. Exp. Sta. Misc. Publ. MP-1186.*
- Bilbro, J.D., and Ray, L.L.
1961. Performance of four cotton varieties in relation to planting date on the High Plains of Texas, 1960. *Tex. Agr. Exp. Sta., Progress Report 2197.*
- Bilbro, J.D., and Ray, L.L.
1973. Effect of planting date on yield and fiber properties of three cotton cultivars. *Agron. J.* 65:606-609.
- Bilbro, J.D., and Wajura, D.F.
1982. Reduced cotton productivity from delayed emergence. *Trans. ASAE* 25:1484-1487.
- Bingham, G.E.; Gillespie, C.H.; and McQuaid, J.H.
1978. Development of a miniature, rapid-response carbon dioxide sensor. Lawrence Livermore Laboratories. UCRL-52440. pp. 19.
- Bird, L.S.
1973. Effect of resistance and escape from pathogens of cotton on yield. *Proc. Beltwide Cotton Prod. Res. Conf., Cot. Dis. Council* 33:102-107.
- Bird, L.S.
1978. Determining biological performance for cotton planting-seed. *Proc. Beltwide Cotton Prod. Res. Conf. Proc. Cot. Dis. Council* 38:217-219.
- Bird, L.S., and Ergle, D.R.
1961. Seedling growth differences of several cotton varieties and the influence of gibberellin. *Agr. J.* 53:171-172
- Bird, L.S.; Liverman, C.; Percy, R.G.; and Bush, D.L.
1979. The mechanism of multi-adversity resistance in cotton: Theory and results. *Proc. Beltwide Cotton Prod. Res. Conf.* 1979:226-228.
- Bird, I. S., and Reyes, A.A.
1967. Effects of cottonseed quality on seed and seedling characteristics. *Proc. Beltwide Cotton Prod. Res. Conf.* 1967:199-206.
- Birnbaum, E.H.; Beasley, C.A.; and Dugger, W.M.
1974. Boron deficiency in unfertilized cotton (*Gossypium hirsutum*) ovules grown *in vitro*. *Plant Physiol.* 54:931-935.
- Birnbaum, E.H.; Dugger, W.M.; and Beasley, C.A.
1977. Interaction of boron with components of nucleic acid metabolism in cotton ovules cultured *in vitro*. *Plant Physiol.* 59:1034-1038.
- Bishnoi, U.R.
1971. Deterioration of cotton seed under warm, moist conditions and its consequence in terms of seed and plant responses. Ph.D. Dissertation. Mississippi State University, Miss. State. MS. pp. 79.
- Bishnoi, U.R., and Delouche, J.C.
1980. Relationship of vigor tests and seed lots to cotton seedling establishment. *Seed Sci. and Tech.* 8:341-346.

- Bishop, J.O.; Morton, J.G.; Roshbash, M. and Richardson, M.
1971. Three abundance classes in HeLa cell messenger RNA. *Nature* 250:199-204.
- Bishop, P.M., and Whittingham, C.P.
1968. The photosynthesis of tomato plants in a carbon dioxide enriched atmosphere. *Photosynthetic* 2:31-38.
- Bjorkman, O.; Gauthl, E.; Hiesey, W.M.; Nicholson, F.; and Nobs, M.A.
1968. Growth of *Minulus*, *Marchantia* and *Zea* under different oxygen and carbon dioxide levels. *Carnegie Inst. Wash. Yearbook* 67:477-478.
- Bjorkman, O., and Pearcy, R.W.
1982. Physiological responses to increasing atmospheric carbon dioxide. *In Proc. of an Int'l Conf. on Rising Atmospheric Carbon Dioxide and Plant Productivity*. Athens, Georgia, May 23-28, 1982. Amer. Assoc. for the Advancement of Science, Washington, D.C.
- Black, M.
1980/81. The role of endogenous hormones in germination and dormancy. *Isr. J. Bot.* 29:181-192.
- Blizzard, W.E., and Boyer, J.S.
1980. Comparative resistance of the soil and the plant to water transport. *Plant Physiol.* 66:809-814.
- Bloodworth, M.E.
1960. Effect of soil temperature on water use by plants. *Trans. Seventh Int'l. Cong. Soil Science.* 1:153-163.
- Blouin, F.A., and Cherry, J.P.
1980. Identification of color-causing pigments in biscuits containing cottonseed flour. *J. Food Sci.* 45:953-957.
- Blouin, F.A.; Zarins, Z.M.; and Cherry, J.P.
1981a. Color. *In J.P. Cherry (ed.), Protein Functionality in Foods*, pp. 21-39. American Chemical Society.
- Blouin, F.A.; Zarins, A.M.; and Cherry, J.P.
1981b. Role of flavonoids in the production of color in biscuits prepared with wheat and cottonseed flours. *J. Food Sci.* 46:266-271.
- Bockholt, A.J.; Rodgers, J.S.; and Richmond, T.R.
1969. Effects of various storage conditions on longevity of cotton, corn and sorghum seeds. *Crop Sci.* 9:151-153.
- Bodie, J.M.; Limperis, T.; and Steve, W.C.
1978. New test for determining cotton seed germination. *Proc. Beltwide Cotton Prod. Mech. Conf.* 1978:76.
- Bohm, W.
1974. Mini-Rhizotrons for root observations under field conditions. *Z. Ackerpflanzenbau.* 140:282-287.
- Bohm, W.
1979. *Methods of Studying Root Systems*. Springer-Verlag.
- Bohorquez, J.O.
1977. Temperature relations of cotton seed germination. M.S. Thesis. Mississippi State University, Miss. State, MS. pp. 41.
- Bollenbacher, K.; Fulton, N.D.; and McCutchen, B.E.
1963. Behaviour of artificially deteriorated cottonseed after various storage periods. *Agron. J.* 55:521-523.
- Bollini, R.; Alessandro, V.; and Chrispeels, M.J.
1983. Processing of seed reserve protein in the endoplasmic reticulum: Evidence for two glycosylation steps. *J. Cell. Biol.* 96:999-1007.
- Boote, K.J.
1975. Photosynthate distribution into fruits of Florunner peanut relative to location. pp. 72. *Proc. Amer. Peanut Res. Ed. Assoc.*

- Boote, K.J.; Gallaher, R.N.; Robertson, W.K.; Hinson, K.; and Hammond, L.C.
1978. "Effect of Foliar Fertilization on Photosynthesis, Leaf Nutrition, and Yield of Soybeans." *Agron. J.* 70:787-791.
- Bondie, J.M., Limperis, T.; and Steere, W.C.
1978. A new test for determining cottonseed germination. *Proc. Beltwide Cotton Prod. Mech. Conf* 1978 76
- Bortman, S.J.; Trelease, R.N.; and Miernyk, J.A.
1981. Enzyme development and glyoxysome characterization in cotyledons of cotton seeds. *Plant Physiol.* 68:82-87
- Bouma, D.
1970. Effects of nitrogen nutrition on leaf expansion and photosynthesis of *Trifolium subterraneum* L. I. Comparison between different levels of nitrogen supply. *Ann. Bot.* 34:1131-1142.
- Bourland, F.M., and Ibrahim, A.A.L.
1980a. Effects of delinting and drying methods on cotton seed quality. *Proc. Beltwide Cotton Prod Res. Conf* pp 75-77.
- Bourland, F.M., and Ibrahim, A.A.L.
1980b. Differential effects of seed deterioration on cotton cultivars. *Agron. Abstr.*, pp 108
- Boveys, B.R., and Kriedmann, P.E.
1974. Hormonal regulation of gas exchange. *In Mechanisms of Regulation of Plant Growth*. R.L. Bieleski, A.R. Ferguson, and M.M. Cressell (eds.), *Bull. 12 Royal Society of New Zealand*, Wellington, N.Z.
- Bowen, H.D.
1961. Oxygen and physical impedance affecting germination. *Cotton Gin and Oil Mill Press* 62 37-38.
- Bower, C.A., and Fireman, M.
1957. Saline and alkali soils. *In USDA Yearbook of Agriculture, Soil* pp 282-290. U.S. Gov. Print Office, Washington.
- Bowes, G., and Ogren, W.L.
1972. Oxygen inhibition and other properties of soybean ribulose 1,5-diphosphate carboxylase. *J. Biol. Chem.* 247:2171-2176.
- Bowman, F.H.
1882. *The Structure of the Cotton Fiber*. Manchester.
- Boyd, J.D., and Foster, R.C.
1975. Microfibrils in primary and secondary wall growth develop trellis configuration. *Can. J. Bot* 53:2687-2701.
- Boyer, J.S.
1965. Effects of osmotic water stress on metabolic rates of cotton plants with open stomata. *Plant Physiol.* 40:229-234
- Boyer, J.S.
1970. Leaf enlargement and metabolic rates in corn, soybean, and sunflower at various leaf water potentials. *Plant Physiol.* 46:233-235.
- Boyer, J.S.
1976a. Photosynthesis at low water potentials. *Phil. Trans. R. Soc. Lond. B.* 273:501-512.
- Boyer, J.S.
1976b. Water deficits and photosynthesis. *In T.T. Kozlowski (ed.), Water Deficits and Plant Growth*. Vol. 4. Soil and Water Measurements, Plant Response, and Breeding for Drought Resistance. Acad. Press, New York.
- Bradford, M.M.
1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Anal. Biochem.* 72:248-254.

- Brashears, A.D.; Minton, E.B.; and Green, J.A.
1979 Potential of the ASI seed analyzer for evaluating cotton seed quality. Proc. Beltwide Cotton Prod. Res. Conf. 1979:111-112.
- Brauns, F.E., and Brauns, D.A.
1960. The Chemistry of Lignin. Acad. Press. New York.
- Brazzel, J.R., and Gaines, J.C.
1956. The effect of pink bollworm infestations on yield and quality of cotton. J. Econ. Entomol. 49:852-854.
- Brazzel, J.R., and Gaines, J.C.
1957. Cotton yield and quality losses caused by various levels of pink bollworm infestations. J. Econ. Entomol. 50:609-613.
- Brevedan, R.E.; Egli, D.B.; and Leggett, J.E.
1978. "Influence of N Nutrition on Flower and Pod Abortion and Yield of Soybeans." Agron. J. 70:81-84.
- Brewer, F.R., and Ferry, G.
1974. Effects of air pollution on cotton in the San Joaquin Valley, Calif. Agr. 28:6-7.
- Brian, P.W.; Petty, J.H.T.; and Richmond, P.T.
1959 Effect of gibberellic acid on development of autumn color and leaf fall of deciduous woody plants. Nature 183:58-59.
- Bridges, J.C., Jr.
1962. Vigor testing of cottonseed. M.S. Thesis. Mississippi State University, Miss. State, MS. pp. 102.
- Briggs, R.E.
1981 Varietal response to Pix treated cotton in Arizona. Proc. Beltwide Cotton Prod. Res. Conf. pp. 47.
- Briggs, R.E.; Maatoug, M.A.; Hofmann, W.C.; Taylor, B.B.; and Stedman, S.W.
1983. Flowering, boll set, and yield in drip irrigated cotton in Arizona. University of Arizona Cotton Report. pp. 37-40.
- Brinkerhoff, L.A., and Hunter, R.E.
1963. Internally infected seed as a source of inoculum for the primary cycle of bacterial blight of cotton. Phytopath. 53:1397-1401.
- Bronkers, F.
1961. Une technique simple pour la germination du pollen de cotonnier. Acad. Roy. des Sci. d'Outremer. Bull. des Seances 7:601-603.
- Bronkers, F.; Dekeyser, B.; and Staincr, F.
1972. Etude de la germination du pollen de cotonnier (*Gossypium hirsutum* L.) *in vitro*. Cot. Fib. Trop. 27:395-402.
- Brouwer, R., and Hoogland, A.
1964. Responses of bean plants to root temperatures: II. Anatomical aspects. Jaafb. I.B.S.:23-31.
- Brown, A.H.
1933. Effects of sulfuric acid delinting on cottonseeds. Bot. Gaz. 94:755-770.
- Brown, C.M., Ashworth, L.J., Jr., and McMeans, J.L.
1975. Differential response of cotton varieties to infection by *Aspergillus flavus*. Crop Sci. 15:276-279.
- Brown, H.
1927. Cotton. McGraw-Hill, New York. pp. 517.
- Brown, H.B.
1938. Cotton. McGraw-Hill, New York.
- Brown, H.B., and Pope, H.W.
1939. Effect of nitrogen, phosphorus and potassium on the earliness of cotton. Louisiana Agr. Exp. Sta. Bull. 206.

- Brown, H.B., and Ware, J.O.
1958. Cotton McGraw-Hill, New York. pp. 566.
- Brown, H.F., and Escombe, F.
1902. The influence of varying amounts of carbon dioxide in the air on the photosynthetic process of leaves and on the mode of growth of plants. Proc. Royal Soc. Lond. 70B:397-413
- Brown, H.S., and Addicott, F.T.
1950. The anatomy of experimental leaflet abscission in *Phaseolus vulgaris*. Amer. Jour. Bot. 37:650-656.
- Brown, J.W.S., Ersland, D.R., and Hall, T.C.
1982. Molecular aspects of storage protein synthesis during seed development. In: The Physiology and Biochemistry of Seed Development, Dormancy, and Germination. A.A. Khan, ed. Elsevier, Biomedical Press, NY pp. 3-42.
- Brown, K.J.
1968. Translocation of carbohydrate in cotton. Movement to the fruiting bodies. Ann. Bot. 32:703-713.
- Brown, K.J.
1971. Plant density and yield of cotton in Northern Nigeria. Cotton Grow. Rev. 48:255-266.
- Brown, K.J.
1973. Factors affecting translocation of carbohydrates to fruiting bodies of cotton. Cotton Grow. Rev. 50:32-42.
- Brown, K.W.; Jordan, W.R.; and Thomas, J.C.
1976. Water stress induced alterations of the stomatal response to decreases in leaf water potential. Physiol. Plant. 37:1-5
- Brown, L.C.
1957. Chemical defoliation of cotton. VII. Effectiveness of adjuvants under several specific plant and environmental conditions. Agron. J. 49:563-566.
- Brown, L.C.; Cathey, G.W.; and Lincoln, C.
1962. Growth and development of cotton as affected by toxaphene-DDT, methyl parathion, and calcium arsenate. Jour. Econ. Ent. 55:298-301.
- Brown, L.C., and Hyer, A.H.
1954. A preliminary report on the influence of varying periods of darkness on the defoliability of several varieties of cotton. Proc. Beltwide Cotton Def. Conf. 8:44
- Brown, L.C., and Hyer, A.H.
1956. Chemical defoliation of cotton. V. Effects of premature defoliant and desiccant treatments on boll components, fiber properties, germination and yield of cotton. Agron. J. 48:50-55.
- Brown, L.C., and Kurtz, E.B.
1959. The *in vitro* synthesis of fats in cottonseed. Agron. J. 51:49-50
- Brown, L.C.; Lincoln, C.; Frans, R.F.; and Waddle, B.A.
1961. Some effects of toxaphene-DDT and calcium arsenate on growth and development of cotton. Jour. Econ. Ent. 54:309-311
- Brown, L.C., and Rhyne, C.L.
1954. Chemical defoliation of cotton. II. The influence of boll maturity on the defoliability of species and varieties of cotton. Agron. J. 46:128-132.
- Brown, L.C., and Wilson, C.C.
1952. Some effects of zinc on several species of *Gossypium L.* Plant Physiol. 27:812-817
- Brown, L.E.
1969. Methods for the determination of cyclopropanoid fatty acids: VIII. The HBr titration method applied to small samples. J. Amer. Oil Chem. Soc. 46:654-656.
- Brown, R.M., and Montezinos, D.I.
1976. Cellulose microfibrils. Visualization of the biosynthetic and orienting complexes in the plasma membrane. Proc. Nat. Acad. Sci. U.S.A. 73:143-147

- Browning, V.D.; Taylor, H.M.; Huch, M.G.; and Klepper, B.
1975. Water relations of cotton: A rhizotron study. Agr. Exp. Sta. Auburn Univ. Bull. No. 467.
- Bruce, R.R., and Romkens, M.J.M.
1965. Fruiting and growth characteristics of cotton in relation to soil moisture tension. Agron. J. 57:135-140.
- Bruce, R.R., and Shipp, C.D.
1962. Cotton fruiting as affected by soil moisture regime. Agron. J. 54:15-18.
- Brun, W.A., and Cooper, R.L.
1967. Effects of light intensity and carbon dioxide concentration on photosynthetic rate of soybean. Crop Sci. 7:451-454.
- Bruyn, L. P. de
1964. Influence of soil moisture deficit on growth and production of cotton. Abstr. Emp. Cotton Growing Rev. 43:69.
- Buchanan, B.B.
1980. Role of light in the regulation chloroplast enzymes. Ann. Rev. Plant Physiol. 31:341-374.
- Buchanan, B.B., and Schurmann, P.
1973. Regulation of ribulose-1,5-diphosphate carboxylase in the photosynthetic assimilation of carbon dioxide. J. Biol. Chem. 248:4956-4964.
- Bugbee, W.M., and Sappenfield, W.P.
1970. Effect of *Verticillium* wilt on cotton yield, fiber properties and seed quality. Crop Sci. 10:649-652.
- Buie, T.S.
1929. Fruiting habit of the cotton plant. South Carolina Agr. Exp. Sta. Bull. No. 261.
- Bunch, H.D.; Dale, J.J., Jr.; and Guerry, W.W.
1961. Separation of cockleburrs from acid-delinted cottonseed. Miss. Agr. Exp. Sta. Inf. Sheet No. 714.
- Bunce, J.A.
1977a. Effects of water stress on leaf expansion, net photosynthesis, and vegetative growth of soybeans and cotton. Can. J. Bot. 56:1492-1498.
- Bunce, J.A.
1977b. Nonstomatal inhibition of photosynthesis at low water potentials in intact leaves of species from a variety of habitats. Plant Physiol. 59:348-350.
- Bunce, J.A.
1981. Relationships between maximum photosynthetic rates and photosynthetic tolerance of low leaf water potentials. Can. J. Bot. 59:769-774.
- Burch, T.A., and Delouche, J.C.
1959. Absorption of water by seeds. Proc. Ass. Offic. Seed Analysts. North America 49:142-150.
- Burg, S.P.
1968. Ethylene, plant senescence, and abscission. Plant Physiol. 43:1503-1511.
- Burns, G.N.
1969. The Science of Genetics. An Introduction to heredity. The MacMillan Co., London.
- Burriss, J.S.
1976. Seed/seedling vigor and field performance. Jour. Seed Tech. 1:58-74
- Burriss, R.H., and Black, C.C.
1976. CO₂ Metabolism and Productivity. University Park Press, Baltimore, MD. pp. 432.
- Buxton, D.R.; Briggs, R.E.; Patterson, L.L.; and Watkins, S.D.
1977. Canopy characteristics of narrow row cotton as influenced by plant density. Agronomy Journal 69:929-933.
- Buxton, D.R.; Patterson, L.L., and Briggs, R.E.
1979. Fruiting pattern in narrow row cotton. Crop Science 19:17-22.
- Buxton, D.R.; Melick, P.J.; Patterson, L.L.; and Godinez, C.A.
1977a. Evaluation of seed treatments to enhance Pima cotton seedling emergence. Agron. J. 69:672-676.

- Buxton, D.R., Melick, P.J.; Patterson, L L ; and Pegelow, E.L., Jr.
1977b. Relationships among cotton seed vigor and emergence. *Agron. J.* 69:677-681.
- Buxton, D.R., and Sprenger, P.J
1976. Genetic variability for cottonseed germination at favorable and low temperatures. *Crop Sci.* 16:243
- Buxton, D.R., Sprenger, P.J., and Pegelow, E.J., Jr.
1976. Periods of chilling sensitivity in germinating Pima cottonseed. *Crop Sci.* 16:471-474.
- Buxton, D.R.; Stapleton, H.N.; Makki, Y.; and Briggs, R.E.
1973. Some effects of field weathering of seed cotton in desert environment. *Agron. J.* 65:14-17
- Bykov, O.D.; Koshkin, V.A.; and Catsky, J.
1981. Carbon dioxide compensation concentration of C₃ and C₄ plants. Dependence on temperature. *Photosynthetica*, 15:114-121

C

- Cabangbang, R.P., and Covar, F.P.
1978. Variation among cotton seeds derived from different primings. *Phillip. J. Crop Sci.* 3:215-220
- Calahan, J.S.
1977. Some physiological effects of high sodium, calcium, and chloride concentrations on cotton. Ph.D. Dissertation, Texas A&M University.
- Calahan, J.S., Jr., and Joham, H.E.
1974. Sodium and calcium interactions in the salt tolerance of cotton. *Proc. Beltwide Cotton Prod. Res. Conf. National Cotton Council, Memphis.* pp. 38-39.
- Caldwell, R.L.; Stith, L.S.; and Weinberg, B.B.
1966. A qualitative chemical difference in cotton in response to infection by *Verticillium albo-atrum*. *Proc. Ann. Cotton Disease Council, Cotton Defoliation Physiology Conf., and Cotton Improvement Conf.* pp. 113-116
- Caldwell, W.P.
1962. Relationship of preharvest environmental factors to seed deterioration in cotton. Ph.D. Dissertation, Mississippi State University, Mississippi State, MS.
- Calkins, E.W.S.
1961. Cotton fiber weight distribution (2) *Text Res. Journ.* 31:176-177.
- Calvert, A., and Slack, G.
1975. Effects of carbon dioxide enrichment on growth, development and yield of glasshouse tomatoes. I. Responses to controlled concentrations. *J. Hort. Sci.* 50:61-71
- Camp, C.R., and Lund, Z.F.
1964. Effect of soil compaction on cotton roots. *Crops and Soils.* Nov. 8-9
- Camp, A.F., and Walker, M.N.
1927. Soil temperature studies with cotton. *Univ. of Fla. Agr. Expt. Sta. Bull. No. 189* 1-32
- Cannon, W.A.
1925. Physiological features of roots, with special reference to the relation of roots to the aeration of the soil. *Carnegie Inst. Pub. No. 368.* Washington, D.C.
- Caplan, A., Herrera-Estrella, L.; Inze, D.; Van Haute, E.; Van Montagu, M.; Schell, J.; and Zambryski, P.
1983. Introduction of genetic material into plant cells. *Science* 222 815-821.
- Carlson, R.W.
1983. The effect of SO₂ on photosynthesis and leaf resistance at varying concentrations of CO₂. *Environ. Pollut. Ser. A.* 30:309-321
- Carlson, R.W., and Bazzaz, F.A.
1980. The effects of elevated CO₂ concentrations on growth, photosynthesis, transpiration, and water use efficiency of plants. *In* J.J. Singh and A. Deepak (eds.), *Environmental and Climatic Impact of Coal Utilization*, pp 609-623. Acad. Press. New York.

- Carlson, R.W., and Bazzaz, F.A.
1982. Photosynthetic and growth response to fumigation with SO₂ at elevated CO₂ for C₃ and C₄ plants. *Oecologia* 54:50-54.
- Carns, H.R.
1951. Oxygen, respiration, and other critical factors in abscission. Ph.D. Dissertation, University of California, Los Angeles.
- Carns, H.R.
1958. Present status of the abscission accelerator from young cotton bolls. Proc. 13th Cotton Defoliation and Physiology Conf., Houston pp. 39.
- Carns, H.R.
1966. Abscission and its control. *Ann. Rev. Plant Physiol.* 17:295-314.
- Carns, H.R.; Addicott, F.T.; Baker, K.C.; and Wilson, R.K.
1961. Acceleration and retardation of abscission by gibberellic acid. *In Int. Conf. on Plant Growth Regulation.* pp. 559-566. Iowa State University Press, Ames
- Carns, H.R.; Addicott, F.T.; and Lynch, R.S.
1951. Some effects of water and oxygen on abscission *in vitro*. *Plant Physiol.* 26:629-630.
- Carns, H.R., Hacskeylo, J.; and Embry, J.L.
1955. Relation of an indole-3 acetic acid inhibitor to cotton boll development. Proc. 9th Ann. Beltwide Cotton Defoliation Conf., pp. 65-68.
- Carns, H.R., and Mauney, J.R.
1968. Physiology of the cotton plant. *In F.C. Elliott, M. Hoover, and W.K. Porter (eds.), Advances in Production and Utilization of Quality Cotton: Principles and Practices,* pp. 41-43. Iowa State University Press, Ames, Iowa.
- Carpita, N.C., and Delmer, D.P.
1980. Protection of cellulose synthesis in detached cotton fibers by polyethylene glycol. *Plant Physiol.* 66:911-916.
- Carpita, N.C., and Delmer, D.P.
1981. Concentration and metabolic turnover of UDP—Glucose in developing cotton fibers. *J. Biol. Chem.* 256:308-315.
- Carson, E.W.
1974. *The Plant Root and Its Environment.* University of Virginia Press.
- Carter, D.L.; Wiegand, C.L.; and Allen, R.R.
1964. The salinity of non-irrigated soils in the Lower Rio Grande Valley of Texas. USDA, ARS. pp. 41-98.
- Carter, M.E., Cherry, J.P.; and Miller, P.A.
1979. Science and Education Administration's program on maintaining and improving quality of cottonseed for processing. *Oil Mill Gaz.* 83:22-27.
- Cathey, G.W.
1978. Evaluation of potassium 3,4-dichloroisothiazole-5-carboxylate as a harvest-aid chemical on cotton. *Crop Sci.* 18:301-304.
- Cathey, G.W.
1979. Harvest-aid chemicals and practices for cotton. *Outlook Agr.* 10:191-197.
- Cathey, G.W.
1980. Chemical plant growth regulators: Mid south cotton. Proc. Plt. Grow. Reg. Work. Gro. Conf. pp. 197-198.
- Cathey, G.W., and Barry, H.R.
1977. Evaluation of glyphosate as a harvest-aid chemical on cotton. *Agron. J.* 69:11-14.
- Cathey, G.W.; Elmore, C.D., and McMichael, B.L.
1981c. Some physiological responses of cotton leaves to foliar application of potassium 3,4-dichloroisothiazole-5-carboxylate and S,S,S-tributyl phosphotriothoate. *Physiol. Plant.* 51:140-144.

- Cathey, G.W., and Hacskaylo, J.
1971 Prolonged foliar contact as a possible means of increasing the effectiveness of defoliant. Proc. Beltwide Cotton Prod. Res. Conf. pp 31-33.
- Cathey, G.W., and Luckett, K.E.
1980. Some effects of growth regulator chemicals on cotton earliness, yield, and quality. Proc. Beltwide Cotton Prod. Res. Conf. pp 35.
- Cathey, G.W., Luckett, K.E.; and Rayburn, S.T.
1982. Accelerated cotton boll dehiscence with growth regulator and desiccant chemicals. Field Crops Res 5:113-120
- Cathey, G.W.; Ross, B.W., and Harvey, A.J.
1981a. Some effects of acephate on growth and development of cotton. Proc. Beltwide Cotton Prod. Res. Conf. pp. 45.
- Cathey, G.W.; Ross, B.W.; and Harvey, A.J.
1981b. Absorption, translocation, and accumulation of ¹⁴C-acephate in cotton plants. Proc. Plt. Grow. Reg. Work Gro. Conf pp. 165.
- Catsimpooulas, N.; Kenney, J.A., Meyer, E.W., and Szuhaj, B.F.
1971. Molecular weight and amino acid composition of glycinnin subunits. J. Sci. Fd. Agric. 22:448-450.
- Cave, G., Tolley, L.C.; and Strain, B.R.
1981. Effect of carbon dioxide enrichment on chlorophyll content, starch content and starch gran structure in *Trifolium subterraneum* leaves. Physiol. Plant. 51:171-174.
- Chabot, B.F., and Bunce, J.A.
1979 Drought stress effects on leaf carbon balance. In O.T. Solbrig, S. Jain, G.H. Johnston, and P.H. Raven (eds.), Topics in Plant Population Biology, pp 338-355. Columbia University Press, New York.
- Chailakhyan, M. Kh.
1968 Flowering hormones of plants. In F. Wightman and G. Setterfield (eds.), Biochemistry and Physiology of Plant Growth Substances, pp. 1317-1340. The Runge Press, Ltd., Ottawa, Canada.
- Chailakhyan, M. Kh.
1979 Genetic and hormonal regulation of growth. Flowering and sex expression in plants. Amer. J. Bot. 66:717-936.
- Chan, B.G., and Waiss, A.C., Jr.
1981 Evidence for acetogenic and shikimic pathways in cotton glands. Proc. Beltwide Cotton Prod. Res. Conf. pp. 49
- Chan, B.G.; Waiss, A.C., Jr., and Lukefahr, M.
1977. Condensed tannin, an antibiotic chemical from *Gossypium hirsutum* L. J. Insect Physiol. 24:113-118 pp. 49-51.
- Chan, B.G., Waiss, A.C., Jr.; Binder, R.G.; and Elliger, C.A.
1978. Inhibition of *Lepidopterous* larval growth by cotton constituents. Ent. Exp. & Appl. 24:94-100
- Chandler, W.H.
1951 "Deciduous Orchards." Lee and Febiger, Philadelphia, Penn.
- Chang, C.S.; Clark, R.L.; and Welch, G.B.
1967. The effect of static loads and energy on the germination of cottonseed. Miss. Agr. Exp. Sta. Inf. Sheet No. 980.
- Chang, C.W.
1975. Carbon dioxide and senescence in cotton plants. Plant Physiol. 55:515-519.
- Chang, C.W.
1979. Starch and its component ratio in developing cotton leaves. Plant Physiol. 63:973-977.
- Chang, C.W.
1980. Starch depletion and sugars in developing cotton leaves. Plant Physiol. 65:844-847.

- Chang, Y.P., and Jacobs, W.P.
1973 The regulation of abscission and IAA by senescence factor and abscisic acid. *Amer. J. Bot.* 60:10-16.
- Chapman, H.W., and Loomis, W.E.
1953. Photosynthesis in the potato under field conditions. *Plant Physiol.* 28:703-716.
- Chatterjee, S.
1977. Studies on the abscission of flowers and fruits of cotton (*Gossypium barbadense* L.). *Biol. Plant.* 19:81-87.
- Chatterjee, S., and Chatterjee, S.K.
1972. Ethrel effect on senescence of cotyledonary leaves of *Gossypium barbadense* L. *Science and Culture* 38:32-34.
- Chatterjee, S., and Leopold, A.C.
1963. Auxin structure and abscission activity. *Plant Physiol.* 38:268-273.
- Chements, F.E.
1921. Aeration and air content. The role of oxygen in root activity. Carnegie Inst. Pub. No. 315, Wash. D.C.
- Cherry, J.P.
1977. Oilseed enzymes as biological indicators for food uses and applications. *In Enzymes in Food and Beverage Processing*. R.L. Ory and A.J. St. Angelo, (eds.), ACS Symposium Series, No 47. American Chemical Society, Washington, D.C. pp 209-228.
- Cherry, J.P.
1978. Enzymes as quality indicators in edible plant tissues. *In Postharvest Biology and Biotechnology*. H.O. Hultin and M. Milner, (eds.), Food and Nutrition Press, Inc. Westport, Conn. pp. 370-399.
- Cherry, J.P.; Berardi, L.C.; Zarins, Z.M.; Wadsworth, J.I.; and Vinnett, C.H.
1978c. Cottonseed protein derivatives as nutritional and functional supplements in food formulations. *In Improvement of Protein Nutritive Quality of Foods and Feeds*. M. Friedman, (ed.), Plenum Publish Co., New York, NY., pp. 767-796.
- Cherry, J.P., and Goodwin, S.D.
1978. Composition of cottonseed from bolls contaminated with varying numbers of pink bollworms. *Proc. Beltwide Cotton Prod. Res. Conf* pp. 51-53.
- Cherry, J.P., and Katterman, F.R.H.
1971. Nonspecific esterase isozyme polymorphism in natural populations of *Gossypium thurberi*. *Phytochem.* 10:141-145
- Cherry, J.P.; Katterman, F.R.H.; and Endrizzi, J.E.
1970. Comparative studies of seed proteins of species of *Gossypium* by gel electrophoresis. *Evolution* 24:431-447.
- Cherry, J.P., Katterman, F.R.H., and Endrizzi, J.E.
1971. A comparative study of seed proteins of allopolyploids of *Gossypium* by gel electrophoresis. *J. Genet. and Cytol.* 13:155-158.
- Cherry, J.P.; Katterman, F.R.H.; and Endrizzi, J.E.
1972. Seed esterases, leucine aminopeptidases and catalases of species of the genus *Gossypium*. *Theoret. and Appl. Genet.* 42:218-226.
- Cherry, J.P., and Leffler, H.R.
1984. Seed. In: Cotton. R.S. Kohel and C.F. Lewis, eds. *Agronomy Monograph no 24, ASA-CCSA-SSSA*, Madison, WI. pp. 511-569.
- Cherry, J.P.; Simmons, J.G.; Hyer, A.H.; Garber, R.H.; Carter, L.M.; and Cooper, H.B.
1979a. Quality of module-stored cottonseed in California. *Proc. Beltwide Cotton Prod. Res. Conf.*, pp. 36-40.
- Cherry, J.P.; Simmons, J.G.; and Kohel, R.J.
1978a. Potential for improving cottonseed quality by genetic and agronomic practices. *In Nutritional Improvement of Food and Feed Proteins*. M. Friedman (ed.), Plenum Press, NY. pp. 343-364.

- Cherry, J.P.; Simmons, J.G.; and Kohel, R.J.
1978c. Cotton seed composition of National Variety Test cultivars grown at different Texas locations. Proc. Beltwide Cotton Prod. Res. Conf., pp. 47-50.
- Cherry, J.P.; Simmons, J.G.; Kohel, R.J.; Cooper, H.B.; Lehman, M.; Dobbs, J.; Fry, K.E.; Kittock, D.L.; and Henneberry, T.J.
1979b. Relationship of cotton seed quality to genetic and agronomic practices. Cotton Gin and Oil Mill Press 80:18-21.
- Cherry, J.P.; Simmons, J.G.; Nelson, M.L.; Colwick, R.F.; Barker, G.L.; Wesley, R.A.; and Williford, J.R.
1980. Quality of artificially dried (forced heated air, microwaved, lyophilized) cottonseed from unopened bolls. Proc. Beltwide Cotton Prod. Res. Conf., pp. 43-51.
- Cherry, J.P.; Simmons, J.G.; and Tallant, J.D.
1977. Cottonseed protein composition and quality of *Gossypium* species and cultivars. Proc. Beltwide Cotton Prod. Res. Conf. pp. 46-49.
- Cherry, T.
1976. Planting seed quality control. California-Arizona programs. Proceedings of the 1976 Beltwide Production Mechanization Conference. pp. 3739.
- Chester, K.S.
1938. Gravity grading, a method for reducing seed borne disease of cotton. Phytopath. 28:745-749.
- Chester, K.S.
1940. Field results with gravity graded cottonseed. Phytopath. 30:703.
- Chester, K.S.
1941. The probability law in cotton seedling disease. Phytopath. 31:1078-1088.
- Childers, N.F., and Cowart, F.F.
1935. The photosynthesis, transpiration, and stomata of apple leaves as affected by certain nutrient deficiencies. Proc. Amer. Soc. Hort. Sci. 33:160-163.
- Ching, T.M., and Schoolcraft, I.
1968. Physiological and chemical differences in aged seeds. Crop Sci. 8:407-409.
- Chlan, C.A., and Dure, L. III
1983. Plant seed embryogenesis as a tool for molecular biology. Mol. & Cell Biochem. 55:5-15.
- Choinski, J.S., Jr., and Trelease, R.N.
1978. Control of enzyme activities in cotton cotyledons during maturation and germination. II. Glyoxysomal enzyme development in embryos. Plant Physiol. 62:141-145.
- Choinski, J.S., Jr., Trelease, R.N., and Doman, D.C.
1981. Control of enzyme activities in cotton cotyledons during maturation and germination. III. *In vitro* development in the presence of abscisic acid. Planta 152:428-435.
- Chollet, R., and Anderson, L.L.
1976. Regulation of ribulose 1,5-bisphosphate carboxylase/oxygenase activities by temperature pretreatment and chloroplast metabolites. Arch. of Biochem. and Biophys. 176:344-351.
- Chollet, R., and Ogren, W.L.
1975. Regulation of photorespiration in C₃ and C₄ species. Bot. Rev. 41:137-179.
- Chrispeels, M.J., Higgin, T.J.U.; Craig, S.; and Spencer, D.
1982. Role of the endoplasmic reticulum in the synthesis of reserve proteins and the kinetics of their transport to protein bodies in developing pea cotyledons. J. Cell Biol. 93:5-14.
- Christiansen, M.N.
1960. A study of the effect of temperature levels of germination environment on chemical and physical characteristics of cotton seedlings. Ph.D. Dissertation Department of Field Crops, N.C. State.
- Christiansen, M.N.
1961. A method of measuring and expressing epigeous seedling growth rate. Crop Sci. 2:487-489.
- Christiansen, M.N.
1963. Influence of chilling upon seedling development of cotton. Plant Physiol. 38:520-522.

- Christiansen, M.N.
1964 Influence of chilling upon subsequent growth and morphology of cotton seedlings. *Crop Sci.* 4:584-586.
- Christiansen, M.N.
1967. Periods of sensitivity to chilling in germinating cotton. *Plant Physiol.* 42:431-433.
- Christiansen, M.N.
1968 Induction and prevention of chilling injury to radicle tips of imbibing cottonseed. *Plant Physiol.* 43:743-746
- Christiansen, M.N.
1969. Seed moisture content and chilling injury to imbibing cotton seed. *Proc. Beltwide Cotton Prod. Res. Conf.* 1969:50-51.
- Christiansen, M.N.
1978. The physiology of plant tolerance to temperature extremes. In G.A. Jung (ed.), *Crop Tolerance to Suboptimal Land Conditions*, ASA Special Publication No. 32, pp. 173-191, American Society of Agronomy, Madison, Wisconsin.
- Christiansen, M.N.
1979. Physiological bases for resistance to chilling. *Hort Sci.* 14:583-586.
- Christiansen, M.N., and Ashworth, E.N.
1978. Prevention of chilling injury to seedling cotton with anti-transpirants. *Crop Sci.* 18:907-908.
- Christiansen, M.N.; Carns, H.R.; and Slyter, D.J.
1970. Stimulation of soluble loss from radicles of *Gossypium hirsutum* L. by chilling anaerobiosis, and low pH. *Plant Physiol.* 46:53-56.
- Christiansen, M.N., and Justus, N.
1963. Prevention of field deterioration of cotton seed by an impermeable seed coat. *Crop Sci.* 3:439-440.
- Christiansen, M.N., and Lewis, C.F.
1973. Reciprocal differences in tolerance to seed-hydration chilling in F₁ progeny of *Gossypium hirsutum* L. *Crop Sci.* 13:210-212.
- Christiansen, M.N., and Moore, R.P.
1959. Seed coat structural differences that influence water uptake and seed quality in hardseed cotton. *Agron J.* 51:582-584.
- Christiansen, M.N.; Moore, R.P.; and Rhyne, C.L.
1960. Cotton seed quality preservation by a hard seed characteristic which restricts internal water uptake. *Agron. J.* 52:81-84.
- Christiansen, M.N., and Thomas, R.O.
1969. Season long effects of chilling treatment applied to germinating cotton seed. *Crop Sci.* 9:672-673.
- Christiansen, M.N., and Thomas, R.O.
1971. Seed hydration-chilling treatment effects on germination and subsequent growth and fruiting of cotton. *Crop Sci.* 11:454-456.
- Christidis, B.G.
1955. Dormancy in cotton seed. *Agron. J.* 47:400-403.
- Christidis, B.G., and Harrison, G.J.
1955. *Cotton Growing Problems*. McGraw-Hill Book Company, Inc. New York, Toronto, London.
- Chytiris, T.
1961. Cotton fiber weight distribution (1). *Text. Res. Journ.* 31:175-176.
- Clark, B.E.
1953. Relationship between certain laboratory tests and the field germination of sweet corn. *Proc. Assoc. Off. Seed Anal.* 1953:42-44.
- Clark, R.L.; Welch, G.B.; and Anderson, J.H.
1969. Effect of high-velocity impact on germination and crackage of cottonseed. *Trans. of the ASAE* 12:748-751.

- Clark, W.C.
1982. Carbon Dioxide Review, 1982. Institute for Energy Analysis. Oak Ridge Assoc Universities. Oak Ridge, TN. Oxford University Press, New York. pp 440.
- Clay, W.F., Katterman, F.R.H.; and Hammett, J.R.
1975. Nucleic acid metabolism during germination of Pima cotton (*Gossypium barbadense*). Plant Physiol. 55:231-236
- Cleland, R.E.
1977. The control of cell enlargement. In D.H. Jennings (ed.), Integration of Activity in the Higher Plant, The University Press, Cambridge.
- Cleland, R.E.
1979. Auxin and H⁺-excretion: The state of our knowledge. In F. Skoog (ed.), Plant Growth Substances, Springer Verlag, New York.
- Clough, J.M., and Peet, M.M.
1981. Effects of intermittent exposures at high atmospheric CO₂ on vegetative growth in soybean. Physiol. Plant. 53:565-569.
- Clough, J.M.; Peet, M.M.; and Kramer, P.J.
1981. Effects of high atmospheric CO₂ and sink size on rates of photosynthesis of a soybean cultivar. Plant Physiol. 67:1007-1010
- Coats, G.E.
1966. Effects of NAA on early growth of cotton. Proc. 1966 Beltwide Cotton Prod. Res. Conf. pp. 228-236
- Cock, J.H., and Yoshida, S.
1973. Changing sink and source relations in rice (*Oryza sativa* L.) using carbon dioxide enrichment in the field. Soil Sci. Plant Nutr. 19:229-234.
- Cogneć, M.
1976. Variations in the physiological and hormonal states of cotton fruit and their relationship with the initiation of abscission (Translated from French) Ph.D. Dissertation, Univ. of Paris VI. pp 245.
- Cole, D.F., and Christjansen, M.N.
1975. Effect of chilling duration on germination of cotton seed. Crop Sci. 15:410-412.
- Cole, D.F., and Wheeler, J.E.
1974. Effect of pre-germination treatments on germination and growth of cotton at sub-optimal temperatures. Crop Sci. 14:451-454.
- Collings, G.H., and Warner, J.D.
1927. Root development of cotton on Cecil sandy loam during 1926. Agron. J. 19:839-842
- Collins, W.B.
1976. Effect of carbon dioxide enrichment on growth of the potato plant. Hort Sci. 11:467-469.
- Colvin, J.R.
1972. Structure and biosynthesis of cellulose. Macromol. Sci. 1:47
- Colwick, R.F.; Garner, T.H.; Christenbury, G.D.; Welch, G.B.; Clark, R.L.; Delouche, J.C.; Baskin, C.C.; Sorenson, J.W.; Wilkes, L.H.; Person, N.K., and Schroeder, H.W.
1972. Factors affecting cotton seed damage in harvesting and handling. Agricultural Research Service, USDA Prod. Res. Rept. No. 135.
- Conner, J.W., Krieg, D.R.; and Gipson, J.R.
1972. Accumulation of simple sugars in developing cotton bolls as influenced by night temperatures. Crop Sci. 12:752-754.
- Constable, G.A.
1976. Temperature effects on the early field development of cotton. Austr. Jour. Exp. Agr. and Anim. Husb. 16:905-910.
- Constable, G.A.
1977a. Narrow row cotton Naomi Valley. 1. Growth, yield and quality of four cultivars. Austr. J. of Exp. Agr. and Husb. 17:135-142.

- Constable, G.A.
1977b. Narrow row cotton Naomi Valley. 2. Plant population and row spacing. *Austr. J. of Exp Agr. and Husb.* 17:143-148.
- Constable, G.A. and Gleeson, A.C.
1977. Growth and distribution of dry matter in cotton (*Gossypium hirsutum* L.). *Austr. J. Agr. Res.* 28:249-256
- Constable, G.A. and Hearn, A.B.
1981. Irrigation for crops in a sub-humid environment. VI. Effect of irrigation and nitrogen fertilizer on growth, yield and fiber quality. *Irrig. Sci.* 3:17-28.
- Constable, G.A. and Rawson, H.M.
1980. Carbon production and utilization in cotton: inferences from a carbon budget. *Austr. J. Pl. Physiol.*
- Constantin, M.J.
1964. Fertilization and embryogenesis in *G. hirsutum* X *G. Barbadosense* L. hybrids. *Proc. 16th Ann. Cott. Imp. Conf.* pp 47.
- Cook, M.G., and Evans, L.T.
1978. Effect of relative size and distance of competing sinks on the distribution of photosynthetic assimilates in wheat. *Aust. J. Plant Physiol.* 5:495-509
- Cooper, H.B.; Cherry, J.P.; Simmons, J.G.; Lehman, M.; and Dobbs, J.
1979. Seed quality traits of Acala cottonseed grown in California. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 40.
- Cooper, H.B., and Hyer, A.H.
1977. Glandless cotton breeding in the far west. A progress report. *Proc. Glandless Cotton Conf.* 1:84-92.
- Cooper, H.P.; Paden, W.R., and Phillippe, M.M.
1953. Effects of applications of sodium in fertilizer on yields and composition of the cotton plants. *Soil Sci.* 76:19-28.
- Cooper, R.L., and Brun, W.A.
1967. Response of soybeans to a carbon dioxide-enriched atmosphere. *Crop Sci.* 7:455-457
- Cooper, T.G., and Beevers, H.
1969. β -oxidation in glyoxysomes from castor bean endosperm. *J. Biol. Chem.* 244:3514-3520.
- Cooper, W.C., and Horanic, G.
1973. Induction of abscission at hypobaric pressures. *Plant Physiol.* 51:1002-1004.
- Cornelius, J.; Bassi, J., and Holloway, J.
1970. The aspects of defoliation based on tests conducted to compare phosphate and chlorate defoliant and their additives with RP2929 and Wiltz 65. *Proc. Beltwide Cotton Prod. Res. Conf.* pp 38-39.
- Cothren, J.T.
1980. Boll opening responses of cotton to ethrel and GAF-7767141. *Proc. Plt. Grow. Reg. Work. Gro. Conf.* pp. 83.
- Cothren, J.T., and Cotterman, C.D.
1980. Evaluation of cytozyme Crop as a foliar application to enhance cotton yields. *Ark. Farm Res.* 29:2-3.
- Cotton, J.R.
1965. Breeding cotton for tolerance to *Verticillium* wilt. U.S. Department of Agriculture, ARS 34-80.
- Cowan, I.R.
1977. "Stomatal Behavior and Environment." *In Advances in Botanical Research Vol. 4* Acad. Press, pp. 117-227
- Cowan, I.R., and Farquhar, G.D.
1977. Stomatal function in relation to leaf metabolism and environment. *Symp. Soc. Exp. Biol.* 31:471-505.

- Cowan, I.R., and Milthorpe, F.L.
1968. Plant factors influencing the water status of plant tissues. In T.T. Kozlowski (ed.), *Water Deficient and Plant Growth*. Vol. 1, pp. 137-193. Acad. Press, New York.
- Cowan, I.R.; Raven, J.A.; Hartung, W.; and Farquhar, G.D.
1982. A possible role for abscisic acid in coupling stomatal conductance and photosynthetic carbon metabolism in leaves. *Aust. J. Plant Physiol.* 9:489-498.
- Cowan, I.R., and Troughton, J.H.
1971. The relative role of stomata in transpiration and assimilation. *Planta* 97:325-336.
- Cracker, L.E., and Abeles, F.B.
1969. Abscission: Role of abscisic acid. *Plant Physiol.* 44:1144-1149
- Crane, J.C.
1964. Growth substances in fruit setting and development. *Ann. Rev. Plant Physiol.* 15:303-326.
- Crawford, S.H.
1981. Effects of mequiquat chloride on cotton in Northeast Louisiana. *Proc. Beltwide Cotton Prod. Res. Conf.*, pp. 45-46.
- Creelman, R.A.
1975. The effects of boll produced abscisic acid upon the terminal growth and fruit retention of *Gossypium hirsutum* L. cv. Deltapine 16. Doctoral Dissertation, University of Arkansas, Fayetteville, Ark.
- Creelman, R.A., and Sabbe, W.E.
1976. The effects of exogenous ABA (abscisic acid) upon cotton plant terminal growth. *Proc. 28th Cotton Improvement Conf.* pp. 104-107.
- Crowther, F.
1934a. Studies in growth analysis of the cotton plant under irrigation in the Sudan. I. The effects of different combination of nitrogen applications and water supply. *Ann. Bot.* 48:877-913
- Crowther, F.
1934b. Studies in growth of the cotton plant under irrigation on the Sudan. II. Seasonal development and yield. *Ann. Bot.* 49:509-533.
- Crowther, F.
1941. Studies in growth analyses of the cotton plant under irrigation in the Sudan. II. Seasonal variations in development and yield. *Ann. Bot.* 509-533.
- Cummins, W.R., Kende, H., and Raschke, K.
1971. Specificity and reversibility of the rapid stomatal response to abscisic acid. *Planta* 99:347-351
- Cummings, M.B., and Jones, C.H.
1918. The aerial fertilization of plants with carbon dioxide (sic). *Vermont Sta. Bull.* 211, pp. 56.
- Curley, R.G., Kepner, R.A.; Hoover, M.; McCutcheon, U.U.; Stronberg, L.K., and Yeary, E.A.
1973. Seed cotton storage, and aid to both growers and ginners. *Calif. Agric.* 27:7-9.
- Cutler, J.M., and Rains, D.W.
1977. Effects of irrigation history on responses of cotton to subsequent water stress. *Crop Sci.* 17:329-335.
- Cutler, J.M., and Rains, D.W.
1978. Effects of water stress and hardening on the internal water relations and osmotic constituents of cotton leaves. *Physiol. Plant.* 42:261-268.
- Cutler, J.M.; Rains, D.W.; and Loomis, R.S.
1977a. Role of changes in solute concentration in maintaining favorable water balance in field-grown cotton. *Agron J.* 69:773-779.
- Cutler, J.M.; Rains, D.W.; and Loomis, R.S.
1977b. The importance of cell size in the water relations of plants. *Physiol. Plant.* 40:255-260

D

Dalianis, C.D.

- 1982 Rate of radicle emergence as a measure of seedling emergence and vigor in cotton. (*Gossypium hirsutum*). Seed Sci & Technol 10:35-45.

Dale, J.E.

- 1959 Some effects of the continuous removal of floral buds on the growth of the cotton plant. Ann Bot. 23:636-649.

Dale, J.E.

1961. Investigations into the stomatal physiology of upland cotton. I. The effects of hour of day, solar radiation, temperature, and leaf water content on stomatal behaviour. Ann. Bot. 25:39-52.

Dalc, J.E., and Milford, G.F.

1965. The role of endogenous growth substances in the fruiting of upland cotton. New Phytol 64:28-37.

Darnell, J.E., Jr.

1982. Variety in the level of gene control in eukaryotic cells. Nature 297:365-371.

Dashek, W.V.; and Llewellyn, G C

1977. Aflatoxin toxicity and mode of action in plant tissues. Ann. Nutr. Alim. 31:841-858.

Da Silva, J.V., Naylor, A.W.; and Kramer, P.J

- 1974 Some ultrastructural and enzymatic effects of water stress in cotton (*Gossypium hirsutum* L.) leaves. Proc. Nat. Acad. Sci. 71:3243-3247.

Dastur, R.H.

1948. Scientific monography. No. 2. Indian Central Cotton Comm. 2nd. ed. (Bombay).

Dastur, R.H.

1959. Physiological studies on the cotton crop and their practical applications. The Indian Central Cotton Committee, Bombay. Vol. 2. pp. 1-105.

Dastur, R.H., and Asana, R.D.

1960. Physiology. In Cotton in India, a Monograph. Vol. 2. The Indian Central Cotton Committee, Bombay. pp. 1-105.

Dave, Y.C.; Douglas, A.G.; and Andries, J.A.

1971. Cotton seed density within plants and varieties and its influence on growth and performance. Proc. Beltwide Cotton Prod. Res. Conf. 1971:64-65.

Davenport, T.L., Jordan, W.R., and Morgan, P.W

- 1977a. Movement and endogenous levels of abscisic acid during water stress-induced abscission in cotton seedlings. Plant Physiol. 59:1165-1168

Davenport, T.L.; Jordan, W.R.; and Morgan, P.W.

1979. Movement of kinetin and gibberellic acid in leaf petioles during water stress-induced abscission in cotton. Plant Physiol. 63:152-155.

Davenport, T.L.; Morgan, P.W.; and Jordan, W.R.

- 1977b. Auxin transport as related to leaf abscission during water stress in cotton. Plant Physiol. 59:554-557.

Davidonis, G H., and Hamilton, R.H.

1983. Plant regeneration from callus tissue of *Gossypium hirsutum* (L.) Plant Sci. Lett. 32:89-93.

Davidson, E.H., and Britten, R.J.

1979. Regulation of gene expression Possible role of repetitive sequences. Science 204:1052-1059.

Davidson, E.H.; Jacobs, H.T; and Britten, R J.

1983. Very short repeats and coordinate induction of genes. Nature 301:468-470.

Davies, W.J.

1978. Some effects of abscisic acid and water stress on stomata of *Vicia faba* L. J. Exp. Bot. 29:175-182

- Davis, D.G.; Dusbabek, K.; and Hoerauf, R.A.
1974 *In vitro* culture of callus tissue and cell suspensions from okra (*Hibiscus esculentus* L.) and cotton (*Gossypium hirsutum* L.). *In Vitro* 9:395-398.
- Davis, J.T.; Sterrett, J.P.; and Leather, G.R.
1972 Ethephon-endothall as a chemical abscissor of bean leaves. *Hortscience* 57:478-480.
- Davis, L.A.
1968 "Gas Chromatographic Identification and Measurement of Abscisic Acid and Other Hormones in Developing Cotton Fruit." Ph D. Dissertation, University of Calif.
- Davis, L. A., and Addicott, F.T.
1972. Abscisic acid: Correlation with abscission and with development in the cotton fruit. *Plant Physiol* 49:644-648.
- Davis, R.G.
1977. *Fusarium* species in the internal microflora of Mississippi cottonseed. *Seed Sci & Technol* 5:587-591.
- Davis, W.J.
1977. Stomatal responses to water stress and light in plants grown in controlled environments and in the field. *Crop Sci* 17:735-740.
- De Bary, Th ; Deltur, R.; and Bronchart, R.
1974 Study of nucleolar vacuolation and RNA synthesis in embryonic root cells of *Zea Mays*. *J. Cell. Sci.* 19:95-112.
- Dechary, J.M., and Pradel, P.
1971. The occurrence of (+)-gossypol in *Gossypium* species. *J. Amer. Oil Chem. Soc.* 48:563-564
- Dechary, J.M , Talluto, K.F.; Evans, W.J ; Carney, W.B.; and Altschul, A.M.
1961. α -Conarachin. *Nature* 190.1125-1126
- DeJong, T.M., and Phillips, D.A.
1981 Nitrogen stress and apparent photosynthesis in symbiotically-grown *Pisum sativum* L. *Plant Physiol* 68:309-313.
- De la Fuente, R.K., and Leopold, A C.
1968 Senescence processes in leaf abscission. *Plant Physiol*. 43.1496-1502.
- DeLanghe, E.
1973. Influence of the sympodial structure of the cotton plant on the activity of plant hormones in flowering and fruiting. *Med. Fac Landb* 38:1061-1067
- DeLanghe, E., Demul, J; Marechal, R.; Raes, G.; Franssen, J., Verschraeghe, L.; and Waterkeyn, L.
1979. Genetical, physiological and ecological influences on the structure and technological properties of cotton fibers. In "Cotton in a Competitive World " P.W. Harrison (ed.), The Textile Institute, Manchester.
- DeLanghe, E , and Eid, A A H.
1971. Preliminary studies on the *in vitro* culture of fertilized cotton ovules. *Annales Scientifiques Textiles Belges*. 4.65-73
- DeLanghe, E ; Kosmodou-Dimitropoulou, S., and Waterkeyn, L.
1978. Effect of hormones on nucleolar growth and vacuolation in elongating cotton fibers. *Planta* 140:269-273
- DeLanghe, E., and Vermeulen, J
1972. Evolution of abscisic acid in the tissues of a cotton boll. *Meded. Fak. Landbouwwetensch. Gent*. 37 634-640.
- Delmer, D.P.
1976. The biosynthesis of cellulose and other plant cell wall polysaccharides. In *Recent advances in Phytochemistry* Vol. 11, Chap. 2, pp 45-76. Frank A. Loewus and V C. Runeckless (eds), (Plenum press, N.J.).
- Delmer, D P.; Beasley, C.A.; and Ordın, L.
1974. Utilization of nucleoside diphosphate glucoses in developing cotton fibers. *Plant Physiol*. 53.149-153

- Delmer, D.P.; Heiniger, U.; and Kulow, C.
1977. UDP-glucose. Glucan Synthetase in Developing Cotton Fibers. I. Kinetic and physiological properties. *Plant Physiol.* 59:713-718.
- Delouche, J.C.
1969. Planting seed quality. *Proc. Beltwide Cotton Prod. Mech. Conf.* 1969:16-18.
- Delouche, J.C.
1974. Maintaining soybean seed quality. *In Soybean: Production, Marketing, and Use.* NFDC, TVA, Muscle Shoals., Alabama, Bull. Y-69:46-62.
- Delouche, J.C.
1976. Standardization of vigor tests. *Jour. Seed Tech.* 1:75-85.
- Delouche, J.C., and Baskin, C.C.
1970. Vigor determines performance of cottonseed. *Cotton International.* 37th Annual Ed pp. 68-70
- Delouche, J.C., and Baskin, C.C.
1973. Accelerated aging techniques for predicting the relative storability of seed lots. *Seed Sci. and Technol.* 1:427-452
- Delouche, J.C., and Caldwell, W.P.
1960. Seed vigor and vigor tests. *Proc. Assoc. Off. Seed Anal.* 50:124-129.
- Delouche, J.C.; Still, T.C.; Raspet, M.; and Lienhard, M.
1962. The tetrazolium test for seed viability. *Miss. Ag. & Forestry Exp. Sta. Tech. Bull.* 51. pp 63.
- Deltour, R., and Bronchant, R.
1971. Changements de l'ultrastructure des cellules radicales de *Zea mays* au debut de la germination. *Planta* 97:197.
- Derman, E.; Krauter, K.; Walling, L.; Weinberger, C.; Ray, M.; and Darnell, J.E., Jr.
1981. Transcriptional control in the production of liver specific mRNAs. *Cell* 23:731-739.
- De Silva, W.H.
1971. Some effects of the growth retardant chemical CCC on cotton in Uganda. *Cotton Grow. Rev.* 48:131-135.
- de Villis, J., Shannon, L.M.; and Yew, J.Y.
1963. Malonic acid biosynthesis in bush bean roots. I. Evidence for oxalacetate as immediate precursor. *Plant Physiol.* 38:686-690.
- de Wit, C.T.
1958. Transpiration and crop yields. *Ag. Res. Rep. Wageningen* 64:1-88.
- de Wit, C.T.
1978. *Simulation of Assimilation, Respiration and Transpiration of Crops.* Halsted Press, New York
- Dewez, J.
1964. Water uptake and heat evolution by germinating cotton seed. *Plant Physiol.* 39:240-244.
- Dzawan, K.; Bassi, P.; and Spencer, M.
1981. Effects of carbon dioxide on ethylene production and action in intact sunflower plants. *Plant Physiol.* 68:831-834.
- Dhindsa, R.S.
1978a. Hormonal regulation of cotton ovule and fiber growth: Effects of bromodeoxyuridine, AMO-1618, and p-chlorophenoxyisobutyric acid. *Planta* 141:269-272.
- Dhindsa, R.S.
1978b. Hormonal regulation of enzymes of nonautotrophic CO₂ fixation in unfertilized cotton ovules. *Z. Pflanzenphysiol. Bd.* 89:355-362.
- Dhindsa, R.S.; Beasley, C.A.; and Ting, I.P.
1975. Osmoregulation in cotton fiber. Accumulation of potassium and malate during growth. *Plant Physiol.* 56:394-398.
- Dhindsa, R.S.; Beasley, C.A.; and Ting, I.P.
1976. Effect of abscisic acid on *in vitro* growth of cotton fiber. *Planta* 130:197-201.

- Dieckert, J.W.; and Dieckert, M.C.
1976a. Production of vacuolar protein deposits in developing seeds and seed protein homology. *In* Genetic Improvement of Seed Proteins, pp. 18-51. National Academy of Science, Washington, D.C.
- Dieckert, J.W., and Dieckert, M.C.
1976b. The chemistry and cell biology of the vacuolar proteins of seeds. *J. Food Sci.* 41:475-482
- Dieckert, J.W., and Dieckert, M.C.
1978. The comparative anatomy of the principal reserve proteins of seeds. *In* D. Muntz, (ed.), Seed Proteins of Dicotyledonous Plants, pp. 73-86. Abhandlungen der Akademie der Wissenschaften der DDR. Abt. Mathematic-Naturwissenschaften-Technik, Akademie of Sciences, GDR, Gatersleben, German Democratic Republic.
- Dilday, R.H., and Shaver, T.N.
1976a. Survey of the regional *Gossypium hirsutum* L. primitive race collection for flowerbud gossypol. USDA Publ. ARS-S-80. pp. 7.
- Dilday, R.H., and Shaver, T.N.
1976b. Survey of the regional *Gossypium hirsutum* L. primitive race collection for flowerbud gossypol and seasonal variation between years in gossypol percentage. USDA Publ. ARS-S-146 pp. 6.
- Dilday, R.H., and Shaver, T.N.
1980. Variability in flower-bud gossypol content and agronomic and fiber properties within the primitive race collection of cotton. *Crop Sci.* 20:91-95
- Dilday, R.H., and Shaver, T.N.
1981. Seasonal variation in flowerbud gossypol content in cotton. *Crop Sci.* 21:956-960.
- Dlouhá, V.; Keil, B.; and Sorm, F.
1963. Structure of the peptides isolated from the tryptic hydrolysate of the A chain of edestin. *Coll. Czech. Chem. Commun.* 29:1835-1850
- Doolan, J.; Gilbert, R.D.; and Fornes, R.E.
1982. Quantitative analyses of scopoletin and lacinilene C 7-methyl ether in cotton leaves and bracts by HPLC. *Proc. Sixth Cotton Dust Res. Conf.* pp. 42-46
- Dorffling, K.; Streich, J.; Kruse, W., and Muxfeldt, B.
1977. Abscisic acid and the after-effect of water stress on stomatal opening potential. *Z. Pflanzenphysiol.* 81:43-56.
- Dorffling, K.; Tietz, D.; Streich, J., and Ludewig, M.
1980. Studies on the role of abscisic acid in stomatal movement. *In* F. Skoog (ed.), *Plant Growth Substances*, 1979, pp. 274-285. Springer-Verlag, Berlin, Heidelberg, New York.
- Dornhoff, G.M., and Shibles, R.
1976. Leaf morphology and anatomy in relation to CO₂ exchange rate of soybean leaves. *Crop Sci.* 16:377-381.
- Douglas, A.G., Brooks, O.L.; and Perry, C.E.
1967. Influence of mechanical harvester damage on cotton seed germination and seedling vigor. *Proc. Beltwide Cotton Prod. Res. Conf.* 1967:129-134.
- Douglas, A.G.; Brooks, O.L.; and Winstead, E.E.
1965. Effect of mechanical harvester damage on germination and vigor of cotton seed. *Proc. Assoc. Off. Seed Anal.* 55:97-103.
- Downs, R.J.
1975. *Controlled environments for plant research*. Columbia University Press, New York. pp. 449.
- Downs, R.J., and Hellmers, H.
1975. *Environment and the Experimental Control of Plant Growth*. Acad. Press, New York. pp. 145.
- Downton, W.J.S.; Bjorkman, O., and Pike, C.
1981. Consequences of increased atmospheric concentrations of carbon dioxide for growth and photosynthesis of higher plants. *In* G.I. Pearman (ed.), *Carbon Dioxide and Climate: Australian Research*, pp. 143-151. Australian Academy of Science, Canberra, Australia.

- Drake, B., and Raschke, K.
1974. Prechilling of *Xanthium strumarium* L. reduces net photosynthesis and, independently, stomatal conductance, while sensitizing the stomata to CO₂. *Plant Physiol.* 53:808-812.
- Dransfield, M.
1961. Some effects of gibberellic acid on cotton. *Empire Cotton Growing Rev.* XXXVIII:3-16.
- Dubbe, D.R.; Farquhar, G.D.; and Raschke, K.
1978. Effect of abscisic acid on the gain of the feedback loop involving carbon dioxide and stomata. *Plant Physiol.* 62:413-417.
- Dube, P.A.; Stevenson, K.R.; Thurtell, G.W.; and Newmann, H.H.
1975. Steady state resistance to water flow in corn under well watered conditions. *Can. J. Plant Sci.* 55:941-948.
- Duckett, K.E., and Goswami, B.C.
1979. The transverse dimensions and mechanical properties of cotton fibres. In "Cotton in a Competitive World". P.W. Harrison (ed.), The Textile Institute, Manchester
- Duggar, J.F., and Cauthen, F.F.
1911. Experiments with cotton. *Ala. Agr. Exp. Sta. Bull.* 153.
- Duggar, W.M., Jr.; Koukol, J.; and Palmer, R.L.
1966. Physiological and biochemical effects of atmospheric oxidants on plants. *J. Air Pollut. Contr. Assoc.* 16:467-471.
- Dugger, W.M., and Palmer, R.L.
1980. Effect of boron on the incorporation of glucose from UDP-glucose into cotton fibers grown in vitro. *Plant Physiol.* 65:266-273.
- Duncan, W.G.; McCloud, D.E.; McGraw, R.L., and Boote, K.J.
1978. Physiological aspects of peanut yield improvement. *Crop Sci.* 18:1015-1020.
- Dunlap, A.A.
1943. Low light intensity and cotton-boll shedding. *Science.* 98 568-569.
- Dunlap, A.A.
1945. Fruiting and shedding of cotton in relation to light and other limiting factors. *Texas Agr. Exp. Sta. Bull. No. 677*
- Dupré, M., Jr.
1959. Permanent set in cotton and the physical mechanism of wrinkle resistant treatments. *Text. Res. Journ.* 29:151-155.
- Durbin, M.L.; Sexton, R.; and Lewis, L.N.
1981. The use of immunological methods to study the activity of cellulase isozymes (B 1:4 glucan 4-glucan hydrolase) in bean leaf abscission. *Plant, Cell and Env.* 4:67-73.
- Dure, L.S. III
1975. Seed Formation. *Ann. Rev. Plant Physiol.* 26:259-278.
- Dure, L.S. III.
1977. Stored messenger ribonucleic acid and seed germination. In A.A. Khan (ed.), *The Physiology and Biochemistry of Seed Dormancy and Germination*, pp. 335-346. Elsevier/North Holland Press.
- Dure, L., III, and Chlan, C.
1981. Developmental biochemistry of cottonseed embryogenesis and germination XII. Purification and properties of principal storage proteins. *Plant Physiol.* 68:180-186.
- Dure, L. III, and Chlan, C.
1985. Cotton seed storage proteins: Products of three gene families. In L. Van Vloten-Doting, G.S.P. Groot, and T.C. Hall (eds) *Molecular Form and Function of the Plant Genome*. Plenum Press, New York.
- Dure, L., III, and Galau, G.A.
1981. Developmental biochemistry of cottonseed embryogenesis and germination XIII. Regulation of biosynthesis of principal storage proteins. *Plant Physiol.* 68:187-194.

- Dure, L., III, Galau, G.A., Chlan, C.A., and Pyle, J.B.
1983b Developmentally regulated gene sets in cotton embryogenesis. In: Plant Molecular Biology. R.B. Goldberg, ed. A.R. Liss, Inc., N.Y., pp 331-342.
- Dure, L., III, Greenway, S.G., and Galau, G.A.
1981. Developmental biochemistry of cottonseed embryogenesis and germination: Changing messenger ribonucleic acid populations as shown by *in vitro* and *in vivo* protein synthesis. *Biochemistry* 20:4162-4168.
- Dure, L.S., and Jensen, W.A.
1957 The influence of gibberellic acid and indoleacetic acid on cotton embryos cultured *in vitro*. *Bot. Gaz.* 119:254-261.
- Dure, L., III; Pyle, J.B.; Chlan, C.A., Baker, J.C.; and Galau, G.A.
1983a. Developmental biochemistry of cottonseed embryogenesis and germination XVII. Developmental expression of genes for the principle storage proteins. *Plant Mol. Biol.* 2:199-206

E

- Easton, J.D., Haskins, F.A., Sullivan, C.Y., and van Bavel, C.H.M.
1969. *Physiological Aspects of Crop Yield*. Amer. Soc. Agron. and Crop Sci. Soc., Madison, Wisconsin. pp. 396.
- Eaton, F.M.
1931. Root development as related to character of growth and fruitfulness of the cotton plant. *J. Agric. Res.* 43:875-883.
- Eaton, F.M.
1932. Boron requirements of cotton. *Soil Sci.* 34:301-305.
- Eaton, F.M.
1944. Deficiency, toxicity, and accumulation of boron in plants. *J. Agric. Res.* 69:237-277.
- Eaton, F.M.
1955. Physiology of the cotton plant. *Ann. Rev. Plant Physiol.* 6:299-328.
- Eaton, F.M., and Ergle, D.R.
1948. Carbohydrate accumulation in the cotton plant at low moisture levels. *Plant Physiol.* 23:169-187.
- Eaton, F.M., and Ergle, D.R.
1952. Fiber properties and carbohydrate and nitrogen levels of cotton plants as influenced by moisture supply and fruitfulness. *Plant Physiology* 27:541-562.
- Eaton, F.M., and Ergle, D.R.
1953. Relationship of seasonal trends in carbohydrate and nitrogen levels and effects of girdling and spraying with sucrose and urea to the nutritional interpretations of boll shedding in cotton. *Plant Physiol.* 28:503-520.
- Eaton, F.M., and Ergle, D.R.
1954. Effects of shade and partial defoliation on carbohydrate levels and the growth, fruiting, and fiber properties of cotton plants. *Plant Physiol.* 29:39-49.
- Eaton, F.M., and Joham, H.E.
1944. Sugar movement to roots, mineral uptake, and the growth cycle of the cotton plant. *Plant Physiol.* 19:507-518.
- Eaton, F.M.; Lyle, E.W.; Rouse, J.T.; Pfeifferberger, G.W., and Tharp, W.H.
1946. Effect of immaturity on characters of cotton fiber, yarn and seed. *J. Amer. Soc. Agron.* 38:1018-1033.
- Eaton, F.M., and Rigler, N.E.
1945. Effect of light intensity, nitrogen supply, and fruiting on carbohydrate utilization by the cotton plant. *Plant Physiol.* 20:380-411.

- Egamberdiyev, A.R.; Aliev, K.A.; and Hasyrov, Yu. S.
 1963. (The movement of the products of photosynthesis (C^{14}) from cotton leaves into the bolls).
 Temat. Sb. Otd. Fiziol. Biofiz. Rast., Akad. NAUK Tadzh. SSR. 4:36-41. Biol. Abstr. 1965.
 No. 17292.
- Ehleringer, J., and Bjorkman, O.
 1977. Quantum yields for CO_2 uptake in C_3 and C_4 plants. Dependence on temperature, CO_2 and
 O_2 concentration. Plant Physiol. 59:86-90
- Ehlig, C.F.
 1969. Effect of fruit load, salinity and spacing on rate of flower production and growth of cotton.
 Proc. Beltwide Cotton Prod. Res. Conf. National Cotton Council, Memphis. pp. 103-105.
- Ehlig, C.F., and Le Mert, R.D.
 1973. Effects of fruit load, temperature, and relative humidity on boll retention of cotton. Crop Sci.
 13:168-171.
- Ehrler, W.L.; Nakayama, F.S.; and van Bavel, C.H.M.
 1965. Cyclic changes in water balance and transpiration of cotton leaves in a steady environment
 Physiol. Plant. 18:766-775.
- Ehrler, W.L.; van Bavel, C.H.M.; and Nakayama, F.S.
 1966. Transpiration, water absorption, and internal water balance of cotton plants as affected by
 light and changes in saturation deficit. Plant Physiol. 41:71-74.
- Ehrman, Lee; and Parsons, P.A.
 1976. The genetics of behavior. Sinauer Associates, Inc., Sunderland, Massachusetts.
- Eickhoff, W.D., and Willcutt, M.H.
 1978. Guidelines—seed cotton modules. Sum Proc. West. Cotton Prod. Res. Conf., pp 53-63.
- Eid, A.A.H.; DeLanghe, E.; and Waterkeyn, L.
 1973. *In vitro* culture of fertilized cotton ovules. I. The growth of cotton embryos. La Cellule
 63:361-371.
- El-Baz, F.K.; El-Fouly, M.M.; and Salib, J.G.
 1971. An investigation on the interaction effect of cycocel, nitrogen fertilization and spacing on
 cotton plants. Agrochimica 15:351-355.
- El-Hinnawy, S.; Erian, N.S.; Shehata, F.W.; and Moawad, F.G.
 1980. IR and NMR spectra of cotton stalk lignin. Ain Shams Univ. Fac. Agric. Res. Bull. 1333, pp.
 27.
- Elissalde, M.H., Jr.; Stipanovic, R.D.; Bell, A.A.; and Elissalde, G S
 1983. Degranulation of mast cells by terpenoid aldehydes of cotton mill dust. Proc. Seventh Cotton
 Dust Res. Conf. 7:84-86.
- Elliger, C.A., Chan, B.G.; and Waiss, A C., Jr.
 1978. Relative toxicity of minor cotton terpenoids compared to gossypol. J. Econ. Entomol. 71:161-
 164.
- Ellinger, C.A.; Chan, B.G., and Waiss, A.C., Jr.
 1980. Flavonoids as larval growth inhibitors, structural factors governing toxicity. Naturwissens-
 chaften 67:358-359.
- Elliott, F.C.; Hoover, M., and Porter, W.K., Jr.
 1968. Advances in Production and Utilization of Quality Cotton: Principles and Practices. Iowa
 State University Press, Ames, Iowa pp. 532.
- Elmore, C.D.
 1980. The paradox of no correlation between leaf photosynthetic rates and crop yield. In J.D.
 Hesketh and J.W. Jones, (eds), Predicting Photosynthesis for Ecosystem Models. Vol. II.
 pp. 155-167. CRC Press, Boca Raton, Florida
- Elmore, C.D., and HacsKaylo, J.
 1973. Some source sink relationships in the cotton plant. Plant Physiol. 51S:62.
- Elmore, C.D., Hesketh, J.D.; and Muramoto, H.
 1967. A survey of rates of leaf growth, leaf aging, and leaf photosynthetic rates among and within
 species. J. Ariz. Acad. Sci. 4:215-219.

- Elmore, C.D., and Leffler, H.R.
1976. Development of cotton fruit. III. Amino acid accumulation in protein and nonprotein nitrogen fractions of cottonseed. *Crop Sci.* 16:867-871
- Elmore, C.D., and McMichael, B.L.
1975. Growth, ^{14}C uptake, and translocation by cotton bracts. pp. 54-56. *In Proc. Beltwide Cotton Prod. Res. Conf. New Orleans, La*
- Elmore, C.D., McMichael, B.L.; and Cathey, G.W.
1978. Effects of a phosphate defoliant on cotton leaves: Water relations and free amino acids. *Crop Sci.* 18:645-648.
- El-Nockrashy, A.S.; Mostafa, H.M.; El-Fouly, M.M.; and El-Shattory, Y.
1976. Biochemical changes in cottonseed during development and maturity. *Nahrung* 20:125-132
- El-Nockrashy, A.S.; Simmons, J.G.; and Frampton, V.L.
1969. A chemical survey of seeds of the genus *Gossypium*. *Phytochem.* 8:1949-1958.
- El-Sharkawy, M.A., and Hesketh, J.D.
1964. Effects of temperature and water deficit on leaf photosynthetic rates of different species. *Crop Sci.* 4:514-518
- El-Sharkawy, M.A., and Hesketh, J.D.
1965. Photosynthesis among species in relation to characteristics of leaf anatomy and CO_2 diffusion resistance. *Crop Sci.* 5:517-521.
- El-Sharkawy, M.A., Hesketh, J.D.; and Muramoto, H.
1965. Leaf photosynthetic rates and other growth characteristics among 26 species of *Gossypium*. *Crop Sci.* 5:173-175.
- El-Zik, K.M., and Bird, L.S.
1969. Inheritance of final seedling stand ability and related components of cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 119-120.
- El-Zik, K.M., Walhood, V.T.; and Yamada, H.
1977. Effect of management inputs on yield and fiber quality of cotton (*Gossypium hirsutum* L.) grown in different row patterns. *Agron. Abstr.* pp. 98
- Endrizzi, J.E.
1974. Survival of seed of *Gossypium thurberi*. *Cotton Grow. Rev.* 51:35-38.
- Enoch, H.Z.
1978a. A theory for optimization of primary production in protected cultivation. *Acta Hort.* 76:31-57.
- Enoch, H.Z.
1978b. The role of carbon dioxide in productivity of crops under protected cultivation. *Acta Hort.* 87:125-129
- Enoch, H.Z., and Hurd, R.G.
1977. Effect of light intensity, carbon dioxide concentration, and leaf temperature on gas exchange of spray carnation plants. *J. Exp. Bot.* 28:84-95
- Enoch, H.Z., and Hurd, R.G.
1979. The effect of elevated CO_2 concentrations in the atmosphere on plant transpiration and water use efficiency. A study with potted carnation plant. *Int. J. Biometeor.* 23:343-351.
- Enoch, H.Z.; Rylski, I.; and Samish, Y.
1970. CO_2 enrichment to cucumber, lettuce, and sweet pepper plants grown in low plastic tunnels in a subtropical climate. *Israel J. Agr. Res.* 20:63-69
- Enoch, H.Z., and Sachs, J.B.
1978. An empirical model of CO_2 exchange of a C_3 plant in relation to light, CO_2 concentration, and temperature. *Photosynthetica* 12:150-157.
- Enoch, H.Z.; Zieslin, N.; Biran, Y.; Halevy, A.H.; Schwarz, M.; Kesler, B.; and Shimshi, D.
1973. Principles of CO_2 nutrition research. *Acta Hort.* 32:97-118.
- Ergle, D.R.
1936. Carbohydrate content of cotton plants at different growth periods and the influence of fertilizers. *J. Amer. Soc. Agron.* 28:775-786.

- Ergle, D.R.
1958. Compositional factors associated with the growth response of young cotton plants to gibberellic acid. *Plant Physiol.* 33:344-346.
- Ergle, D.R., and Bird, L.S.
1958. Preliminary experiments employing gibberellic acid as a cottonseed treatment. *Plant Dis. Reprtr.* 42:320-323.
- Ergle, D.R., and Eaton, F.M.
1951. Sulfur nutrition of cotton. *Plant Physiol.* 26:639-654.
- Ergle, D.R., and Eaton, F.M.
1957. Aspects of phosphorus metabolism in the cotton plant. *Plant Physiol.* 32:106-113.
- Ergle, D.R., and Guinn, G.
1959. Phosphorus compounds of cotton embryos and their changes during germination. *Plant Physiol.* 34:476-482.
- Ergle, D.R.; Hessler, L.E.; and Adams, J.E.
1938. Carbohydrates of the cotton plant under different seasonal conditions and fertilizer treatments. *J. Amer. Soc. Agron.* 30:951-959.
- Ergle, D.R., and McIlrath, W.J.
1952. Response of the cotton plant to late and localized applications of maleic hydrazide. *Bot. Gaz.* 114:114-122.
- Ericson, M.C., and Chrispeels, M.J.
1973. Isolation and characterization of glucosamine containing storage glycoproteins from the cotyledons of *Phaseolus aureus*. *Plant Physiol.* 52:98-104.
- Erwin, D.C.; Fasi, S.D.; and Kahn, R.A.
1979. Growth retardants mitigate *Verticillium* wilt and influence yield of cotton. *Phytopath.* 69:283-287.
- Erwin, D.C.; Isom, W.H.; and Garber, M.J.
1964. Flax seedling emergence as affected by harvester injury, fungicidal treatments and age of seed. *Crop Sci.* 4:217-219.
- Esipova, I.V.
1959. After effects of high and low temperatures on the photosynthesis of the cotton plant. *Fiziologiya rastenii.* 6:104-106.
- Essenberg, M.; Doherty, M.D.; Hamilton, B.K.; Henning, V.T.; Cover, E.C.; McFaul, S.J.; and Johnson, W.M.
1982. Identification and effects on *Xanthomonas campestris* pv. *malvacearum* of two phytoalexins from leaves and cotyledons of resistant cotton. *Phytopath.* 72:1349-1356.
- Evans, L.T.
1969. *The Induction of Flowering.* Cornell University Press, Ithaca, New York. pp. 488.
- Evans, L.T.
1975. The physiological basis of crop yield. Chapter 11. *In* L.T. Evans (ed.), *Crop Physiology: Some Case Histories*, pp. 327-355. Cambridge University Press, London.
- Ewing, E.C.
1918. A study of certain environmental factors and varietal differences influencing the fruiting of cotton. *Miss. Agr. Exp. Sta. Bull.* No. 8.

F

- Fares, Y.; Goeschl, J.D.; Magnuson, C.E.; Nelson, C.E.; Strain, B.R.; Jaeger, C.H.; and Bilpuch, E.G.
1983. A system for studying carbon allocation in plants using ¹⁴C-labeled carbon dioxide. *Radiocarbon.* 25:429-439.
- Farmer, J.B.; and Chandler, S.E.
1902. On the influence of carbon dioxide in the air on the form and internal structure of plants. *Proc. Roy. Soc. Lond.* 70:413-423.

- Farquhar, G.D., and Cowan, I.R.
1974 Oscillations in stomatal conductance *Plant Physiol.* 54:769-772
- Farquhar, G.D.; Dubbe, D.R.; and Raschke, K.
1978. Gain of the feedback loop involving carbon dioxide and stomata Theory and measurement. *Plant Physiol.* 62:406-412.
- Farquhar, G.D., and Sharkey, T.D.
1982. Stomatal conductance and photosynthesis. *Ann. Rev. Plant Physiol.* 33 317-345
- Farquhar, G.D., von Caemmerer, S.; and Berry, J.A
1980 A biochemical model of photosynthetic CO₂ assimilation in leaves of C₃ species. *Planta* 149:78-90.
- Farr, W.K.
1931. Cotton Fibers I Origin and early stages of elongation *Contr. Boyce Thompson Inst.* 3:441-458
- Farr, W.K
1933. Cotton fibers III Cell divisions in the epidermal layer of the ovule subsequent to fertilization. *Contr. Boyce Thompson Inst.* 5:167-172
- Feaster, C.V., Briggs, R.E., and Turcotte, E.L.
1980. Pima cultivar responses to Pix. *Proc. Beltwide Cotton Prod. Res. Conf.* pp 81
- Feder, H., and O'Brien, T.P.
1968. Plant microtechnique: Some principles and new methods. *Amer. J. Bot.* 55 123-142.
- Fenton, R.A ; Mansfield, T.A , and Jarvis, R.G.
1982. Evaluation of the possibilities for modifying stomatal movement *In* J.S McLaren (ed.), *Chemical Manipulation of Crop Growth and Development.* pp. 19-37 Butterworth's, London
- Ferguson, C.H.R., and Simon, E.W.
1973 Membrane lipids in senescing green tissues. *J. Exp. Bot.* 24 307-316
- Ferguson, D., and Turner, J.H.
1971. Influence of unfilled cotton seed upon emergence and vigor. *Crop Sci.* 11:713-715.
- Finer, J.J., and Smith, R.H.
1982. Isolation and culture of protoplasts from cotton (*Gossypium klotzschianum* Anders.) callus cultures. *Plant Sci. Lett.* 26:147-151.
- Finley, I.; Oliver, A D; and Sloan, L.W.
1964. Effect of planting date, time of fruiting and use of insecticides on yield and fiber quality of cotton Louisiana Agr Exp. Sta. Bull. 584.
- Finn, G.A., and Brun, W.A.
1982. Effect of atmospheric CO₂ enrichment on growth, nonstructural carbohydrate content, and root-nodule activity in soybean. *Plant Physiol.* 69:327-331.
- Fiori, L.A.; Louis, G L, and Sands, J.E.
1959. Blending cottons differing widely in maturity I Effect on properties of single yarns *Text. Res. Journ.* 29:706-716.
- Fiori, L.A.; Sands, J.E ; Louis, G.L ; and Tallant, J.D.
1961 Cotton fiber weight distribution (4) *Text. Res. Journ.* 31:178-180.
- Fischer, R.A., and I. Aguilar, M.
1976. Yield potential in a dwarf spring wheat and the effect of carbon dioxide fertilization. *Agron. J.* 68 749-752
- Fisher, C.E., and Burnett, E.
1953 Conservation and utilization of soil moisture *Texas Agr. Exp. Sta. Bull.* 767.
- Fisher, D.B.; Jensen, W A ; and Ashton, M.E.
1968. Histochemical studies of pollen: Storage pockets in the endoplasmic reticulum (ER). *Histochemie* 13:169-182.
- Fisher, R.A.
1970. "After-Effect of Water Stress on Stomatal Opening Potential" *J. of Exp. Botany* 21:386-404.

- Fisher, W.D.
1973. Association of temperature and boll set. Proc. Beltwide Cotton Prod. Res. Conf. pp. 72-73.
- Fisher, W.D.
1975. Heat induced sterility in upland cotton. Proc. Beltwide Cotton Prod. Res. Conf. pp. 85.
- Flaconer, D.S.
1960. Introduction to quantitative genetics. The Ronald Press Co., New York.
- Follin, J.C.
1973. Remarkable action of two growth regulators—BAS 0660W and BAS 0640W—on the cotton plant. *Coton et Fibres Trop.*, Eng. Ed. 29:449-451.
- Ford, M.A., and Thorne, G.N.
1967. Effect of CO₂ concentration on growth of sugar-beet, barley, kale, and maize. *Ann. Bot.* 31:629-644.
- Ford, R.F., and Waddle, B.A.
1970. The use of commercial Accelerate and DEF as an aid in defoliation. Proc. Beltwide Cotton Prod. Res. Conf. pp. 38.
- Fowler, J.L.
1979. Laboratory and field response of pre-conditioned upland cottonseed to minimal germination temperatures. *Argon. J.* 71:223-228.
- Franks, G.N., and Oglesbee, J.C., Jr.
1957. Handling cotton planting seed at cotton gins. USDA Prod. Res. Report No. 7. pp. 14.
- Fransen, T., and Verschraeghe, L.
1967. A study of the reversal phenomenon in the fibrillar structure of the cotton fibre. *Annales scientifiques Belges.* n° 3.40-69.
- Fransen, T. and Verschraeghe, L.
1985. Short Fibres of Cotton Seed in Cotton Bales and Card Lint, and their Influence on Spinnability. In: International Institute of Cotton Cotton Fibres: Their Development and Properties. pp. 5-7. International Institute for Cotton, Manchester, UK.
- Frear, D.S., and Swanson, H.R.
1975. Metabolism of cisanilide (cis-2,5-dimethyl-1-pyrrolidinedicarboxanilide) by excised leaves and cell suspension cultures of carrot and cotton. *Pest Biochem. Physiol.* 5:73-80.
- Freeman, D.W.; Kadan, R.S.; Ziegler, G.M.; and Spadaro, J.J.
1979. Processing factors affecting air classification of defatted cottonseed flour for production of edible protein products. *Cereal Chem.* 56:452-454.
- Frevert, J., Koller, W.; and Kindl, H.
1980. Occurrence and biosynthesis of glyoxysomal enzymes in ripening cucumber seeds. *Hoppe-Seyler's Z. Physiol. Chem.* 361:1557-1565.
- Freytag, A.H., and Coleman, E.A.
1973. Effect on multiple applications of 2,3,5-triiodobenzoic acid (TIBA) on yield of stormproof and nonstormproof cotton. *Agron. J.* 65:610-612.
- Frey-Wyssling, A., and Muhlethaler, K.
1965. *Ultrastructural Plant Cytology.* Elsevier Publishing Co. New York.
- Friedrich, J.W., and Huffaker, R.C.
1980. "Photosynthesis, Leaf Resistances, and Ribulose-1,5-bisphosphate Carboxylase Degradation in Senescing Barley Leaves." *Plant Physiol.* 65:1103-1107.
- Fry, K.E.
1970. Some factors affecting the Hill reaction activity in cotton chloroplasts. *Plant Physiol.* 45:465-469.
- Fry, K.E.
1972. Inhibition of ferricyanide reduction in chloroplasts prepared from water-stressed cotton leaves. *Crop Sci.* 12:698-701.
- Fry, K.E.
1980. Light interception and leaf area in the cotton canopy. University of Arizona Cotton Report. pp. 80-81.

- Fry, K.E.
1983. Heat unit calculations in cotton crop and insect models USDA, ARS, Adv. Agric. Tech., AAT-W-23, pp 23
- Frydrych, J.
1976. Photosynthetic characteristics of cucumber seedlings grown under two levels of carbon dioxide. *Photosynthetica* 10:335-338.
- Fryxell, P.A.
1963 Morphology of the base of seed hairs of *Gossypium*. I Gross Morphology Bot. Gaz. 124:196-199.
- Fryxell, P.A.
1964. Morphology of the base of seed hairs of *Gossypium* II. Comparative morphology. Bot. Gaz. 125:108-114.
- Fryxell, P.A.
1965 Stages in the evolution of *Gossypium* Advanc Frontiers Plant Sci 10 31-56
- Fryxell, P A
1979 The Natural History of the Cotton Tribe. Texas A & M University Press, College Station and London. xviii + pp. 245.
- Fulton, N.D.; Bollenbacher, K.; and Moore, B.J.
1960. A chlorosis of cotton seedlings caused by *Alternaria tenuis*. *Phytopath* 50:575
- Funsch, R W , Mattson, R.H., and Mowry, G.W.
1970 CO₂-supplemented atmosphere increases growth of *Pinus strobus* seedlings *Forest Sci.* 16:459-460.

G

- Gaastra, P.
1959. Photosynthesis of crop plants as influenced by light, carbon dioxide, temperature, and stomatal diffusion resistances *Meded Landbouwhogeschool Wageningen*. 59:1-68.
- Gaastra, P
1963. Climatic control of photosynthesis and respiration. *In* L.T. Evans (ed.), *Environmental Control of Plant Growth*, pp 113-140. Acad Press, New York
- Gaastra, P.
1966 Some physiological aspects of CO₂-application in glasshouse culture *Acta. Hort.* 4:111-116
- Galan-Cano, J.; Risueno, M.C.; and Gimenez-Martin, G
1975 Nucleolar ultrastructure in megaspore mother cells of *Pisum sativum* L. *Cytobiologie* 10, 475.
- Galau, G.A.; Chlan, C.A ; and Dure, L , III
1983. Developmental biochemistry of cottonseed embryogenesis and germination XVI Analysis of the principle cotton storage protein gene family with cloned cDNA probes. *Plant Mol Biol.* 2:189-198
- Galau, G.A., and Dure, L III
1981. Developmental biochemistry of cottonseed embryogenesis and germination: Changing messenger ribonucleic acid populations as shown by reciprocal heterologous complementary deoxyribonucleic acid-messenger ribonucleic acid hybridization. *Biochemistry* 20:4169-4178.
- Galau, G A ; Legocki, A B ; Greenway, S.C.; and Dure, L.S., III
1981. Cotton messenger RNA sequences exist in both polyadenylated and non-polyadenylated forms. *J. Biol Chem.* 256:2551-2560
- Gale, J.; Kohl, H.C . and Hagan, R M.
1967. Changes in water balance and photosynthesis of onion, bean, and cotton plants under saline conditions. *Phys Plant.* 20:408-420.

- Gallup, W.D.
1932. Cottonseed studies. Okla. Exp. Sta. Rep. 4, pp. 178-184.
- Galston, A.W., and Purves, W.K.
1960. The mechanism of action of auxin. *Annu. Rev. Plant Physiol* 11:237-276.
- Garber, R.H., and Hoover, M.
1973. A comparison of acid- and machine-dehnted cotton seed planted at two fungicide seed treatment rates. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 30.
- Gardner, B.R., and Tucker, T.C.
1967. Nitrogen effects on cotton: I. Vegetative and fruiting characteristics. *Soil Sci. Soc. Am. Proc.* 31:780-785.
- Gardner, H.K.; Hron, R.J.; and Vix, H.L.E
1976. Removal of pigment glands (gossypol) from cottonseed. *Cereal Chem.* 53:549-560
- Gardner, W.R
1964. Relation of root distribution to water uptake and availability. *Agron. J.* 56:41-45.
- Gardner, W.R., and Ehlig, C.F.
1962. Some observations on the movement of water to plant roots. *Agron. J.* 54 453-456.
- Garner, W.W., and Allard, H.A.
1923. Further studies in photoperiodism, the response of the plant to relative length of day and night. *J. Agr. Res.* 23:871-920.
- Garner, W.W., Allard, H.A.; and Foubert, C.L.
1914. Oil content of seeds as affected by the nutrition of the plant. *J. Agr. Res.* 3:227-249.
- Gates, D.M.; Strain, B.R., and Weber, J.A.
1983. Changing atmospheric CO₂ concentration and plant responses. *Handbook of Plant Physiology*. Springer Verlag, Berlin.
- Geever, R.F.
1980. The evolution of single-copy nucleotide sequences in the genome of *Gossypium hirsutum* L. Ph.D. Dissertation, University of Arizona.
- Geiger, D.R.
1976. Effects of translocation and assimilate demand on photosynthesis. *Can. J. Bot.* 54 2337-2345.
- Gelmond, H
1979. A review of factors affecting seed quality distinctive to cotton seed production. *Seed Sci. and Tech.* 7:39-46.
- Gerard, C.J.
1980. Emergence force by cotton seedlings. *Agron. J.* 72:473-476.
- Gibbs, M.
1969. Photorespiration, Warburg effect and glycolate. *Ann. N.Y. Acad. Sci.* 168:356-368.
- Gifford, R.M
1977. Growth pattern, carbon dioxide exchange and dry weight distribution in wheat growing under differing photosynthetic environments. *Aust. J. Plant Physiol.* 4:99-110
- Gifford, R.M
1979a. Carbon dioxide and plant growth under water and light stress: Implications for balancing the global carbon budget. *Search* 10:316-318
- Gifford, R.M.
1979b. Growth and yield of CO₂-enriched wheat under water-limited conditions. *Aust. J. Plant Physiol* 6:367-378.
- Gifford, R.M.
1980. Carbon storage by the biosphere. *In* G.J. Pearman (ed.), *Carbon Dioxide and Climate*. Australian Research, pp. 167-181. Australian Academy of Science, Canberra, Australia.
- Gifford, R.M., and Evans, L.T.
1981. Photosynthesis, carbon partitioning and yield. *Ann. Rev. Plant Physiol.* 32:485-509.

- Gifford, R. M. and Jenkins, C. L.
1981 Prospects of applying knowledge of photosynthesis toward improving crop production. In Govindjee (ed.), *Photosynthesis-Applications to Food and Agriculture*, Acad. Press, New York.
- Gilbert, R.D.; Fornes, R.E.; Wang, A., and Lee, K.S.
1980. The isolation of cotton plant components by high performance liquid chromatography. *Tex Res. J.* 50:29-33
- Gill, H S., and Delouche, J.C
1973 Deterioration of seed corn during storage. *Proc. Assoc. Off. Seed Anal.* 63:33-50
- Gilliland, M.G.; Bornman, C.H.; and Addicott, F.T
1976. Ultrastructure and acid phosphatase in pedicel abscission of *Hibiscus*. *Amer. J. Bot.* 63:925-935.
- Ginzburg, C.
1967 The relation of tannins to the differentiation of the root tissues in *Reaumuria palaestina* *Bot Gaz* 128:1-10
- Gipson, J R
1974. Effect of temperature and methyl parathion on vegetative development and fruiting of the cotton plant *Agron. J.* 66:337-341.
- Gipson, J.R., and Joham, H.E.
1968a Influence of night temperature on growth and development of cotton (*Gossypium hirsutum* L.) I. Fruiting and boll development *Agron. J.* 60:292-295.
- Gipson, J.R., and Joham, H.E.
1968b Influence of night temperature on growth and development of cotton (*Gossypium hirsutum* L.) II Fiber properties. *Agron J.* 60:296-298.
- Gipson, J R., and Joham, H.E
1969a. Influence of night temperature on growth and development of cotton (*Gossypium hirsutum* L.). III. Fiber elongation. *Crop Sci.* 9 127-129.
- Gipson, J.R., and Joham, H.E.
1969b. Influence of night temperature on growth and development of cotton (*Gossypium hirsutum* L.). IV. Seed Quality. *Agron. J.* 61 365-367.
- Gipson, J.R., and Ray, L.L.
1968 Fiber elongation rates in different varieties of cotton *Beltwide Cotton Prod. Res. Conf.* pp 212-217
- Gipson, J.R., and Ray, L.L.
1969a. Fiber elongation rates in five varieties of cotton (*Gossypium hirsutum* L.) as influenced by night temperature *Crop Sci.* 9:339-341.
- Gipson, J.R., and Ray, L.L.
1969b. Influence of night temperature on boll development and fiber properties of five varieties of cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 94-96.
- Gipson, J.R., and Ray, L.L
1970. Temperature variety interrelationships in cotton, 1. Boll and fiber development. 2. Seed development and composition. *Cotton Grow. Rev.* 47:257-271.
- Gipson, J.R., and Ray, L.L.
1974 Response of early maturing strains to temperature stress. *Proc. Beltwide Cotton Prod. Res. Conf.* pp 36-38.
- Gipson, J R., and Ray, L.L.
1976. The effect of temperature on certain seed and lint parameters of selected cotton cultivars *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 45-46.
- Gipson, J.R., Ray, L.L.; and Flowers, C.L.
1969. Influence of night temperatures on seed development of five varieties of cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 117-118

- Glat, D.; Taylor, B.B.; and Williams, M.D.
1982. The relationship of predictive tests for planting seed quality and field performance. Proc. Beltwide Cotton Prod. Res. Conf. 1982:65-67.
- Goldbach, E.; Goldbach, H.; Wagner, H.; and Michael, G.
1975. Influence of N-deficiency on the abscisic acid content of sunflower plants. *Physiol. Plant.* 34 138-140
- Goldberg, R.B.; Hoschek, G.; Ditta, G.S.; and Breidenbach, R.W.
1981a. Abundance, diversity, and regulation of mRNA sequence sets in soybean embryogenesis. *Dev. Biol.* 83:201-217.
- Goldberg, R.B.; Hoschek, G.; Ditta, G.S.; and Breidenbach, R.W.
1981b. Developmental regulation of cloned superabundant embryo mRNAs in soybean. *Dev. Biol.* 83:218-231.
- Goodman, A.
1955. Correlation between cloud shade and shedding in cotton. *Nature* 176:39.
- Gore, U.R.
1932. Development of the female gametophyte and embryo in cotton. *Amer. J. Bot.* 19:795-808.
- Gore, U.R.
1943. Delinting and treating cotton seed in Georgia. *Ga. Agr. Exp. Sta. Circular* 141. pp. 18.
- Goudriaan, J., and Ajtay, G.L.
1979. The possible effects of increased CO₂ on photosynthesis. In B. Bolin, E.T. Degens, S. Kempe, and P. Ketner (eds.), *The Global Carbon Cycle, SCOPE 13*, pp. 237-249, Wiley, New York.
- Goudriaan, J.; Ajtay, G.L.; and van Laar, H.H.
1978. Relations between leaf resistance, CO₂ concentration and CO₂ assimilation in maize, beans, lalang grass, and sunflower. *Photosynthetica* 12:241-249.
- Gould, J., and Dugger, W.M.
1982. Glucan biosynthesis by cotton ovule epidermal protoplasts. *Plant Physiol.* 69:26.
- Gould, J.; Palmer, R.L.; and Dugger, W.M.
1983. Wall synthesis by subprotoplasts of cotton fibers. *Plant Physiol.* 72:73.
- Govilla, O.P., and Rao, C.H.
1969. Studies on the *in vitro* germination and storage of cotton pollen. *J. Polymol.* 5:37-41.
- Govindjee
1975. *Bioenergetic of Photosynthesis*. Acad. Press, N.Y.
- Grabe, D.F.
1976. Measurement of seed vigor. *Jour. Seed Tech.* 1:18-32.
- Graecen, E.L.; Ponsana, P.; and Barley, K.P.
1976. Resistance to water flow in the roots of cereals. In O.L. Lange, L. Kappen, and E.D. Schulze (eds.), *Water and Plant Life: Problems and Modern Approaches*, pp. 86-100. Springer-Verlag, Berlin.
- Grant, J.N., and De Gruy, I.V.
1972. Effects of environment on cell wall structure of *Gossypium hirsutum* fibers. *Cotton Grow. Rev.* 49:359-368.
- Grant, J.N.; Ergle, C.J., Jr.; Mitcham, D.; and Powell, R.D.
1970. Structure and properties of cotton fibers from controlled environments. *Text. Res. Journ.* 40:740-749.
- Grant, J.N., and Morlier, O.W.
1948. Relation of specific strength of cotton fibers to fiber length and testing method. *Text. Res. Journ.* 18 481-487
- Grant, J.N.; Orr, R.S.; and Powell, R.D.
1966. Cotton fiber structure and physical properties altered by environment. *Text. Res. J.* 36:432-440.
- Green, D.E.; Cavanah, L.E.; and Pinnell, E.L.
1966. Effect of seed moisture content, field weathering, and combine cylinder speed on soybean seed quality. *Crop Sci.* 6:7-10.

- Green, J.A., and Minton, E.B.
1980. Influence of mechanical damage and fungicide seed treatments on germination and stand with cottonseed. *Crop Sci.* 20:235-239
- Green, K., and Wright, R.
1977. Field response of photosynthesis to CO₂ enhancement in ponderosa pine. *Ecology* 58:687-692.
- Gregg, B.R.
1969. Association among selected physical and biological properties of gravity-graded cotton seed. Ph.D. Dissertation. Mississippi State University, Miss. State, MS pp. 199
- Gribbin, J.
1981. The politics of carbon dioxide. *New Scientist* 9:82-84.
- Grierson, D.; Thompson, J.R.; Garcia-Mora, R.; and Slater, R.J.
1980. Ribonucleic Acid synthesis by isolated Mung Bean nucleoli. *Z. Pflanzenphysiol. Bd.* 97. s. 437-447.
- Griffin, A.C., and McCaskill, O.L.
1964. Storage of seed cotton in trailers. USDA ARS Prod. Res. Report No. 81. pp. 18
- Grimes, D.W., Dickens, W.L., and Anderson, W.D.
1969. Functions for cotton (*Gossypium hirsutum* L.) production from irrigation and nitrogen fertilization variables. II. Yield components and quality characteristics. *Agron. J.* 61:773-776.
- Grimes, D.W., Miller, R.J., and Dickens, W.L.
1970. Water stress during flowering of cotton. *Calif. Agr.* 24:4-6
- Grimes, D.W.; Miller, R.J.; and Schweers, V.H.; Smith, R.B.; and Wiley, P.L.
1972. Soil Strength Modification of Root Development and Soil Water Extraction. *California Agriculture* Nov 1972. pp 12-14
- Grimes, D.W., Miller, R.J.; and Wiley, P.L.
1975. Cotton and corn root development in two field soils of different strength characteristics. *Agron. J.* 67:519-523.
- Grimes, D.W., and Yamada, H.
1982. Relation of cotton growth and yield to minimum leaf water potential. *Crop Sci.* 22:134-139
- Grindley, D.N.
1950. Changes in composition of cottonseed during development and ripening. *J. Sci. Food Agric* 5:147-151.
- Guerra, A.A., and Shaver, T.N.
1969. Feeding stimulants from plants for larvae of the tobacco budworm and bollworm. *J. Econ Entomol.* 62:98-100
- Guilfoyle, T.J.; Lin, C.Y.; Chen, Y.M.; Nagao, R.T.; and Key, J.L.
1975. Enhancement of soybean RNA polymerase I by auxin. *Proc. Nat'l. Acad. Sci. (U.S.)* 72:69-72
- Guinn, G.
1967. An ultrasensitive chemical test for quantitative chromatography of sugars. *J. Chromatog.* 30:178-182.
- Guinn, G.
1971a. Chilling injury in cotton seedlings. Changes in permeability of cotyledons. *Crop Sci.* 11:101-102
- Guinn, G.
1971b. Changes in sugars, starch, RNA, protein, and lipid-soluble phosphate in leaves of cotton plants at low temperatures. *Crop Sci.* 11:262-265.
- Guinn, G.
1972a. Effects of CO₂ level on fruiting and shedding. *Univ. Ariz. Coop. Ext. Ser. Sta. P-24.* Tucson, Ariz. pp. 79.
- Guinn, G.
1972b. Effects of spacing and humidity on fruiting and shedding. *Univ. Ariz. Coop. Ext. Ser. Sta. P-24.* Tucson, Ariz. pp 77-78

- Guinn, G.
1973. Effects of environment on cotton plant productivity. Univ. Ariz. Coop. Ext. Ser. Sta P-30. Tucson, Ariz. pp. 111-112.
- Guinn, G.
1974a. Abscission of cotton floral buds and bolls as influenced by factors affecting photosynthesis and respiration. *Crop Sci.* 14:291-293.
- Guinn, G.
1974b. Abscission, ethylene evolution, and abscisic acid content of young bolls in response to low light intensity. Proc. 28th Cotton Defoliation Physiol. Conf., pp. 40.
- Guinn, G.
1976a. Nutritional stress and ethylene evolution by young cotton bolls. *Crop Sci.* 16:89-91.
- Guinn, G.
1976b. Water deficit and ethylene evolution by young cotton bolls. *Plant Physiol.* 57:403-405
- Guinn, G.
1977. Effects of some organic solvents on ethylene evolution from young cotton bolls. *Plant Physiol.* 60:446-448.
- Guinn, G.
1979. Hormonal relations in flowering, fruiting, and cutout. *In: Cotton Physiology—A Treatise.* Proc. Beltwide Cotton Prod. Res. Conf. pp. 265-276.
- Guinn, G.
1982a. Fruit age and changes in abscisic acid content, ethylene production, and abscission rate of cotton fruits. *Plant Physiol.* 69:349-352.
- Guinn, G.
1982b. Causes of square and boll shedding in cotton. USDA Tech. Bull. 1672. pp. 21.
- Guinn, G., and Eidenbock, M.P.
1982. Catechin and condensed tannin contents of leaves and bolls of cotton in relation to irrigation and boll load. *Crop Sci.* 22:614-616.
- Guinn, G.; Hesketh, J.D.; Fry, K.E.; Mauney, J.R.; and Radin, J.W.
1976. Evidence that photosynthesis limits yield of cotton. Proc. 30th Cotton Physiol. Conf., pp. 60-61.
- Guinn, G., and Hunter, R.E.
1968. Root temperature and carbohydrate status of young cotton plants. *Crop Sci.* 8:67-70
- Guinn, G.; Jordan, K.; Eidenbock, M.; and Pinter, P.
1978. Bloom production, ethylene evolution, and boll abscission as affected by water deficit. Proc. 32nd Cotton Physiol. Conf., pp. 53.
- Guinn, G., and Mauney, J.R.
1980. Analysis of CO₂ exchange assumptions. Feedback control. *In* J.D. Hesketh and J.W. Jones (eds), *Predicting Photosynthesis for Ecosystem Models*, Vol. II, pp. 1-16. CRC Press, Boca Raton, Florida.
- Guinn, G.; Mauney, J.R.; and Fry, K.E.
1981. Irrigation scheduling and plant population effects on growth, bloom rates, boll abscission, and yield of cotton. *Agron. J.* 73:529-534.
- Guinn, G., and Mauney, J.R.
1984a. Fruiting of cotton I. Effects of moisture status on flowering. *Agron. J.* 76:90-94.
- Guinn, G., and Mauney, J.R.
1984b. Fruiting of cotton I. Effects of moisture status in boll retention. *Crop Sci. Agron. J.* 76:94-98

H

- Hacskaylo, J., and Scales, A.L.
1959. Some effects of Guthion alone and in combination with DDT and of Dieldrin-DDT mixture on growth and fruiting of the cotton plant. *J. Econ. Entomol.* 52:396-398.

- Halevy, A H.
1972. Phytohormones in flowering regulation of self-inductive plants. Proc Int Hort. Congr 5:187-198.
- Hall, W C.
1958. Physiology and biochemistry of abscission in the cotton plant. Texas Agr. Exp Sta. MP 285. pp. 23.
- Hall, W.C., and Morgan, P W.
1964. Auxin-ethylene interrelationships, pp 727-745. *In* Régulateurs Naturels de la Croissance Vegetale, J.P. Nitsch (ed.), Centre National de la Recherche Scientifique, Paris
- Hall, W C., Truchelut, G.B.; Leinweber, C.L.; and Herrero, F.A.
1957. Ethylene production by the cotton plant and its effects under experimental and field conditions. *Physiol. Plant.* 10:306-317.
- Halloin, J M.
1974. Inhibition of cottonseed germination by abscisic acid. Proc. Beltwide Cotton Prod Res Conf. pp. 36
- Halloin, J.M
1975a. Postharvest infection of cottonseed by *Rhizopus arrhizus*, *Aspergillus niger*, and *Aspergillus flavus*. *Phytopath.* 65:1229-1232.
- Halloin, J M.
1975b. Solute loss from deteriorated cottonseed. Relationship between deterioration, seed moisture, and solute loss. *Crop Sci.* 15 11-15
- Halloin, J.M.
1976a. Inhibition of cottonseed germination with abscisic acid and its reversal. *Plant Physiol.* 57:454-455.
- Halloin, J M.
1976b. The effect of oxygen on changes in cotton seed color and hardness during ripening. *In* Proc Beltwide Cotton Prod. Res. Conf pp 42.
- Halloin, J M.
1977. Effects on cotton seed of immersion in acetone or methylene chloride. *Crop Sci* 17:867-869
- Halloin, J M.
1981a. Deterioration of cottonseed during weathering and accelerated aging: The role of microorganisms. Proc. Beltwide Cotton Prod. Res. Conf., Jan. 4-8, 1981, New Orleans, LA pp. 29
- Halloin, J.M.
1981b. The influence of premature boll termination on cotton planting seed quality. Proc. Beltwide Cotton Prod. Res. Conf. pp 256-257.
- Halloin, J M
1982. Localization and changes in catechin and tannins during development and ripening of cottonseed. *New Phytol.* 90:651-657
- Halloin, J.M, and Bell, A.A.
1979. Production of nonglandular terpenoid aldehydes within diseased seeds and cotyledons of *Gossypium hirsutum* L. *Agric. Food Chem.* 27:1407-1409.
- Halloin, J M., Turner, J H ; and Hoskinson, P.E
1978. Comparison of seed and fiber properties and yield of glanded and glandless cottons. *Crop Sci* 18:519-520.
- Halloin, J.M, and Greenblatt, G A.
1982. Localized fluorescence of cotton boll tissues in association with resistance to infection by *Diplodia gossypina*. Proc Beltwide Cotton Prod Res Conf. pp. 46
- Hammett, J R., and Katterman, F.R.
1975. Storage and metabolism of poly(adenylic acid)-mRNA in germinating cotton seeds. *Biochem* 14:4375-4379.
- Hancock, N.J
1941. Relative growth rate of the main stem of the cotton plant and its relationship to yield. *J. Amer. Soc. Agron.* 33:590-602

- Hancock, N.I.
1942. Factors in the breeding of cotton for increased oil and nitrogen content. *Tenn. Agr. Exp. Sta. Cir.* 79. pp. 7.
- Hancock, N.I.
1944. Length, fineness, and strength of cotton lint as related to heredity and environment. *J. Amer. Soc. Agron.* 35:530-536.
- Hancock, N.I.
1949. Cotton varieties and related studies. *Univ. Tenn. Ag. Exp. Sta. Bull.* No. 211. pp. 55
- Hand, D.W., and Postlethwaite, J.D.
1971. The response of CO₂ enrichment of capillary-watered single truss tomatoes at different plant densities and seasons. *J. Hort. Sci.* 46:461-470
- Hand, D.W., and Soffe, R.W.
1971. *Light-modulated temperature control and response of greenhouse tomatoes to different CO₂ regimes.* *J. Hort. Sci.* 46:381-396.
- Hanny, B.W.
1980. Gossypol, flavonoid, and condensed tannin content of cream and yellow anthers of five cotton (*Gossypium hirsutum* L.) cultivars. *J. Agric. Food Chem.* 28:504-506.
- Hanny, B.W., and Gueldner, R.C.
1976. An investigation of the surface lipids of the glabrous cotton (*Gossypium hirsutum* L.) strain, Bayou SM1. *J. Agric. Food Chem.* 24:401-403.
- Hanny, B.W.; Meredith, W.R., Jr.; Bailey, J.C.; and Harvey, A.J.
1978. Genetic relationships among chemical constituents in seeds, flower buds, terminals, and mature leaves of cotton. *Crop Sci.* 18:1071-1074.
- Hanny, B.W.; Meredith, W.R., Jr., and M.L. Laster
1975. Emergence and lint yield of cotton from seeds produced under plant bug *Lygus lineolaris* infestations. *Proc. Beltwide Cotton Prod. Res. Conf.* 1975:97-98.
- Hansen, J.; Johnson, D.; Lacin, A.; Lebedeff, S.; Lee, P.; Rind, D.; and Russeli, G.
1981. Climate impact of increasing atmospheric carbon dioxide. *Science* 213:957-966.
- Hardman, L.L., and Brun, W.A.
1971. Effect of atmospheric carbon dioxide enrichment at different developmental stages on growth and yield of components of soybeans. *Crop Sci.* 11 886-888.
- Hardy, R.W.F.
1978. Rate-limiting steps in biological photoproductivity, *In Proceedings of Conf on Genetic Eng. for Nitrogen Fixation.* Acad. Press, New York. pp. 369-380.
- Hardy, R.W.F., and Havelka, U.D.
1973. Symbiotic N₂ fixation. Multifold enhancement by CO₂ enrichment of field-grown soybean. *Plant Physiol* 51:5-35.
- Hardy, R.W.F., and Havelka, U.D.
1975. Photosynthate is a major factor limiting nitrogen fixation by field grown legumes with emphasis on soybeans, pp. 58-76. *In Contributions to the Scientific Literature, Section IV, Biology.* E.I. DuPont de Nemours, Wilmington, Del.
- Hardy, R.W.F., and Havelka, U.D.
1977. Possible routes to increase the conversion of solar energy to food and feed by grain legumes and cereal grains (crop production): CO₂ and N₂ fixation, foliar fertilization, and assimilate partitioning. *In A. Mitsui, S. Mayachi, A. San Pietro, and S. Tamura (eds.), Biological Solar Conversion,* Acad. Press, New York. pp 299-322
- Hare, C.L.
1914. Studies of the chemical composition of the cottonseed. *Science* 39:363.
- Harland, S.C.
1949. Methods and results of selection on experiments with Peruvian Tanguis cotton. II The "Mass Pedigree System" in practice. *Emp. Cotton Grow. Rev.* 26:247-255.

- Harper, L.A.
1971. Mass and energy transfer between the atmosphere and two plant canopy types. Ph.D. Dissertation, Univ. of Georgia. pp 122.
- Harper, L.A.; Baker, D.N.; and Box, J.E., Jr.
1973c. Fertilize the air over a field. *Crops and Soils Mag* 26:8-9.
- Harper, L.A.; Baker, D.N.; Box, J.E., Jr., and Hesketh, J.D.
1973a. Carbon dioxide and the photosynthesis of field crops: A metered carbon dioxide release in cotton under field conditions. *Agron. J* 65:7-11.
- Harper, L.A.; Baker, D.N.; Box, J.E., Jr.; and Hesketh, J.D.
1973b. Carbon dioxide and the photosynthesis of field crops. A tracer examination of turbulent transfer theory. *Agron. J.* 65:574-578.
- Harrington, M.T.
1928. A chemical study of varieties of cottonseed. *Texas Agr. Exp. Sta., Bull.* 374. pp 19
- Harris, B., and Dure, L.S., III.
1978. Developmental regulation in cotton seed germination: Polyadenylation of stored messenger RNA. *Biochemistry* 17:3250-3256.
- Harris, M J., and Heath, R.L.
1981. Ozone sensitivity in sweet corn (*Zea mays* L.) plants: A possible relationship to water balance. *Plant Physiol* 68:885-890.
- Harrison, N.A., and Beckman, C.H.
1982. Time/space relationships of colonization and host response in wilt-resistant and wilt-susceptible cotton (*Gossypium*) cultivars inoculated with *Verticillium dahliae* and *Fusarium oxysporum* f.sp. *vasinfectum*. *Physiol. Plant Pathol* 21:193-207.
- Harrison, G.J., and Fulton, J.H.
1934. Storage of cotton pollen. *J. Agr. Res.* 49:891-896
- Hart, C.E.
1970. Effect of nitrogen deficiency upon translocation of ¹⁴C in sugarcane. *Plant Physiol.* 46:419-422.
- Hartung, W., Heilmann, B.; and Gimmler, H.
1981. "Do chloroplasts play a role in abscisic acid synthesis?" *Plant Sci Lett* 22:235-242.
- Havelka, U D., and Hardy, R.W.F.
1976. Legume N₂ fixation as a problem in carbon nutrition, *In* W.E. Newton and C.J. Nyman (eds), *Proc. 1st Int'l Symposium on Nitrogen Fixation*. Vol. 2. Washington State University Press, Pullman. pp. 456-475.
- Hawkins, B.S., and Peacock, H.A.
1968. Effect on skip-row culture on agronomic and fiber properties of upland cotton (*Gossypium hirsutum* L.) varieties. *Agron. J.* 60:189-191.
- Hawkins, B.S. and Peacock, H.A.
1973. Influence of row width and population density on yield and fiber characteristics of cotton. *Agronomy Journal* 65:47-51.
- Hawkins, B.S.; Matlock, R.L.; and Hobart, C.
1933. Physiological factors affecting the fruiting of cotton with special reference to boll shedding. *Univ. of Arizona. Agric. Exp. Sta. Tech. Bull. No* 46. pp 361-407.
- Hawkins, R.S., and Serviss, G.H.
1930. Development of cotton fibers in the Pima and Acala varieties. *J. Agric. Res.* 40.1017-1029.
- Hayward, H.E.
1938. *The Structure of Economic Plants*. The MacMillan Co., New York.
- Hayward, H.E., and Wadleigh, C.H.
1949. Plant growth on saline and alkali soils. *Adv Agron.* 1:1-38.
- Heagle, A.S.; Body, D.E.; and Heck, W.W.
1973. An open-top field chamber to assess the impact of air pollution on plants. *J Environ Qual.* 2:365-368.

- Hearn, A.B.
1968. Notes on *Gossypium* and *Cienfuegosia* in southern Yemen. *Cotton Grow. Rev.* 45:287-295.
- Hearn, A.B.
1969. Growth and performance of cotton in a desert environment. Research Memoirs #77. Cotton Res. Corp., London. *J. Agric. Sci.* 73:65-97.
- Hearn, A.B.
1972. The growth and performance of rain-grown cotton in a tropical upland environment. *J. Agric. Sci.* 79:121-145.
- Hearn, A.B.
1975. Response of cotton to water and nitrogen in a tropical environment II. Date of last watering and rate of application of nitrogen fertilizer. *J. Agric. Sci., Camb.* 84:419-430.
- Hearn, A.B.
1976. Response of cotton to nitrogen and water in a tropical environment III. Fibre quality. *J. Agric. Sci., Camb.* 86:257-269.
- Hearn, A.B.
1979. Water relationships in cotton. *Outlook in Agric.* 10:159-166.
- Heath, O.V.S.
1930. Plant development and climatic conditions Reports of Exp. Stations. Empire Cotton Corp. Reports 1930.
- Heath, O.V.S.
1948. Studies in stomatal action. Control of stomatal movement by a reduction in the normal carbon dioxide content of the air. *Nature* 161:179-181
- Heath, O.V.S.
1949. Carbon dioxide in the intercellular spaces of leaves during photosynthesis. *Nature* 164:822.
- Heath, O.V.S.
1950. Studies in stomatal behaviour. V. The role of carbon dioxide in the light response of stomata. Part I. Investigation of the cause of abnormally wide stomatal opening with porometer cups. *J. Exp. Bot.* 1 29-62
- Heath, O.V.S.
1959. Light and carbon dioxide in stomatal movements. *In* W. Ruhland (ed.), *Encyclopedia of Plant Physiology*, Vol. 17. pp. 415-464. Springer-Verlag, Berlin, New York.
- Heath, O.V.S., and Meidner, H.
1981. Feedback processes in the opening of the leaf stomata in light. *Proc. Roy. Soc. Lond. B* 231 161-170
- Heath, O.V.S., and Milthorpe, F.L.
1950. Studies in stomatal behaviour. V. The role of carbon dioxide in the light responses of stomata. Part 2. Preliminary experiments on the interrelations of light intensity, carbon dioxide concentration and rate of air flow in controlling the movement of wheat stomata. *J. Exp. Bot.* 1:227-243.
- Heath, O.V.S., and Russell, J.
1954. Studies in stomatal behaviour. VI An investigation of the light responses on wheat stomata with the attempted elimination of control by mesophyll. 2. Interactions with external CO₂ and general discussion. *J. Exp. Bot.* 5:269-292.
- Hector, J.M.
1936. Introduction to the Botany of Field Crops. Vol. II. Non-Cereals. Central News Agency, Ltd., Johannesburg, South Africa. pp. 1127.
- Hedden, P.; MacMillan, J.; and Phinney, B.O.
1978 The metabolism of gibberellins. *Ann Rev Plant Physiol* 29:149-191.
- Hedin, P.A.
1976. Seasonal variations in the emission of volatiles by cotton plants growing in the field. *Environ. Entomol.* 5:1234-1238.

- Hedin, P.A.; Collum, D.H.; White, W.H.; Parrott, W.L.; Lane, H.C.; and Jenkins, J.N.
1981. The chemical basis for resistance in cotton to *Heliothis* insects. In M. Kloza (ed.), Regulation of Insect Development and Behaviour. Part II. pp. 1071-1086. Wroclaw Technical Univ Press.
- Hedin, P.A.; Jenkins, J.N., Collum, D.H., White, W.H., and Parrott, W.L.
1982. Multiple factors contributing to cotton plant resistance to the tobacco budworm. Proc. 183rd ACS Natl Meeting, Div. of Pesticide Chemistry. (Abstract #39).
- Hedin, P.A.; Lindig, O.H.; Sikorowski, P.P.; and Wyatt, M.
1978. Suppressants of gut bacteria in the boll weevil from the cotton plant. J. Econ. Entomol. 71:394-396
- Hedin, P.A.; Miles, L.R., Thompson, A.C.; and Minyard, J.P.
1968. Constituents of a cotton bud. Formulation of a boll weevil feeding stimulant mixture. J. Agric Food Chem. 16:505-513.
- Hedin, P.A., Minyard, J.P.; and Thompson, A.C.
1967. Constituents of the cotton bud. VII. Identification of the anthocyanin as chrysanthemun. Phytochem. 6:1165-1167.
- Hedin, P.A., Thompson, A.C; and Gueldner, R.C.
1975a. A survey of the volatile constituents of cotton lint and waste with regard to byssinosis. J Agric. Food Chem 23:698-703
- Hedin, P.A.; Thompson, A.C.; and Gueldner, R.C.
1975b. Constituents of cotton bud essential oil. Phytochem 14:2087-2088.
- Hedin, P.A., Thompson, A.C.; and Gueldner, R.C
1975c. Survey of the air space volatiles of the cotton plant. Phytochem. 14:2088-2090
- Hedin, P.A.; Thompson, A.C.; Gueldner, R.C.; Rizk, A.M.; and Salma, H.S.
1972. Malvaceae Egyptian cotton leaf essential oil. Phytochem 11:2356-2357.
- Heen, A
1980. Methods for root studies of annual plants. Agric. University of Norway, Dept. of Farm Crops Rep. No. 197. 59.nr 16
- Heggestad, H.E., and Christiansen, M.N.
1978. Variation in the response of cotton varieties to oxidant (ozone) Air Pollution 32nd Cotton Physiology Conf., pp. 40.
- Heggestad, H.E., and Christiansen, M.N.
1982. Effects of air pollutants on cotton. In Effects of Air Pollution on Farm Commodities. Proc. Symp. Hyatt Regency Hotel, Washington, D.C., Feb. 18, 1982. pp 9-32 Izaak Walton League, Washington, D.C
- Heggestad, H.E.; Christiansen, M.N., Craig, W.L.; and Heartley, W.H.
1977. Effects of oxidant air pollutants on cotton in greenhouses at Beltsville, Maryland. In Air Pollution and Its Impact on Agriculture, Cottrell Centennial Symp., Calif State College, Stanislaus, Calif., Jan 13-14, 1977. pp. 101-127. *
- Heilman, M.D.
1981. Interactions of nitrogen with Pix on the growth and yield of cotton. Proc. Beltwide Cotton Prod. Res. Conf., pp 47.
- Heilman, M.D.; Meredith, F.I.; and Gonzalez, C.L.
1971. Ethylene production in the cotton plant (*Gossypium hirsutum* L.) canopy and its effect on fruit abscission. Crop Sci 11:25-27
- Heiniger, U., and Delmer, D.P.
1977. UDP-glucose Glucan synthetase in developing cotton fibers II. Structure of the reaction product. Plant Physiol. 59 719-723.
- Heinstein, P
1980. Partial purification of an elicitor of *Gossypium arboreum* phytoalexins from the fungus *Verticillium dahliae*. Planta Medica. 39:196-197.

- Heinstein, P., and El-Shagi, H.
1981. Formation of gossypol by *Gossypium hirsutum* L. cell suspension cultures. *J. Nat. Prod.* 44:1-6.
- Heinstein, P.; Widmaier, R.; Wegner, P.; and Howe, J.
1979. Biosynthesis of gossypol. *In* T. Swain, J.B. Harborne, and C.F. Van Sumere (eds.), *Biochemistry of Plant Phenolics*, Plenum Press. pp. 313-337.
- Heldt, H.W.
1979. Light dependent changes of stromal H⁺ and Mg²⁺ concentrations controlling CO₂ fixation, *In* Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes. M. Gibbs and E. Latzko (eds.), *Encyclopedia of Plant Physiology*. Vol. 6. pp. 202-207. Springer-Verlag, New York.
- Heldt, H.W.; Chon, C.J.; Maronde, D.; Herold, A.; Stankovic, Z.S.; Walker, D.A.; Krominer, A.; Kirk, M.R.; and Heber, U.
1977. Role of orthophosphate and other factors in the regulation of starch formation in leaves and isolated chloroplasts. *Plant Physiol.* 59:1146-1155.
- Helgerson, S.L., Cramer, W.A.; and Morr , D.J.
1976. Evidence for an increase in microviscosity of plasma membranes from soybean hypocotyls induced by the plant hormone, indole-3-acetic acid. *Plant Physiol.* 58:548-551.
- Helmer, J.D.
1965a. Field and laboratory performance of cottonseed processed by different methods. Ph.D. Dissertation. Mississippi State Univ., Miss. State, MS. pp. 88.
- Helmer, J.D.
1965b. 1964 Mississippi cottonseed survey. *Miss. Farm Res.* 28:3.
- Helmer, J.D. and Abdel-Al, M.S.
1965. Some aspects of seed and boll maturation in cotton. *Proc. Assoc. Off. Seed Anal.* 55:154-162.
- Helmy, H.; Joham, H.E.; and Hall, W.C.
1960. Magnesium nutrition of American Upland and Egyptian cottons. MP-411. Texas Agric. Exp. Sta.
- Henderson, J.H.M., and Nitsch, J.P.
1962. Effects of certain phenolic acids on the elongation of *Avena* first internodes in the presence of auxins and tryptophan. *Nature* 195:780-782.
- Hensarling, T.P.; Yatsu, L.Y.; and Jacks, T.J.
1969. Extraction of lipids from cottonseed tissue: II. Ultrastructural effects of lipid extraction. *J. Amer. Oil Chem. Soc.* 47:224-225.
- Henson, J.E.
1981. Changes in abscisic acid content during stomatal closure in pearl millet (*Pennisetum americanum* (L) Leeke). *Plant Sci. Lett.* 21:121-127.
- Herold, A.
1980. Regulation of photosynthesis by sink activity—the missing link. *New Phytol.* 86:131-144.
- Herold, A.; Lewis, D.H.; and Walker, D.A.
1976. Sequestration of cytoplasmic orthophosphate by mannose and its differential effect on photosynthetic starch synthesis in C₃ and C₄ species. *New Phytol.* 76:397-407.
- Hesketh, J.D.
1963. Limitations to photosynthesis responsible for differences among species. *Crop Sci.* 3:493-496.
- Hesketh, J.D.
1967. Enhancement of photosynthetic CO₂ assimilation in the absence of oxygen as dependent upon species and temperature. *Planta* 76:371-374.
- Hesketh, J.D.
1968. Effects of light and temperature during plant growth on subsequent leaf CO₂ assimilation rates under standard conditions. *Aust. J. Biol. Sci.* 21:235-241.
- Hesketh, J.D., and Baker, D.N.
1967. Light and carbon assimilation by plant communities. *Crop Sci.* 7:285-293.

- Hesketh, J.D.; Baker, D.N ; and Duncan, W.G.
1971. Simulation of growth and yield of cotton: Respiration and the carbon balance. *Crop Sci.* 11:394-398.
- Hesketh, J.D , Baker, D.N ; and Duncan, W.G.
1972a. Simulation of growth and yield in cotton. II. Environmental control of morphogenesis. *Crop Sci* 12.436-439
- Hesketh, J.D.; Fry, K.E., Guinn, G ; and Mauney, J.R.
1972b. Experimental aspects of growth modeling: Potential carbohydrate requirement of cotton bolls. *In* C. Murphy *et al.* (eds), *Modeling the Growth of Trees, Proc. of a Workshop on Tree Growth Dynamics and Modeling*, Duke Univ., Oct. 12, 1971. pp. 123-127.
- Hesketh, J.D., and Hellmers, H.
1973. Floral initiation in four plant species growing in CO₂ enriched air. *Environ. Control in Biol.* 11.51-53.
- Hesketh, J.D , Lane, H.C , and Thompson, A.C.
1976. Partitioning photosynthate in a field N-trial, with emphasis on internodal wood and bark growth. *In* Proc. Beltwide Cotton Prod. Res. Conf., Las Vegas, NV. pp 61-67.
- Hesketh, J.D., and Low, A.
1968. Effect of temperature and fiber quality of cotton varieties of diverse origin. *Emp Cotton Grow. Rev.* 45.243-257.
- Hess, D C
1976. Prospects for glandless cottonseed. *Oil Mill Gaz.* 81:20-26.
- Hess, D.C.
1977a. Genetic improvement of gossypol-free cotton varieties. *Cereal Foods World* 22:98-105
- Hess, D C
1977b. Selecting for increased seed density in cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 84-86.
- Hessler, L.E.
1961. The relationship between cotton fiber development and fiber properties. *Text. Res. Journ.* 31:38-43
- Hessler, L.E.; Lane, H.C.; and Young, A.W
1959. Cotton fiber development studies at suboptimum temperatures *Agron. J.* 51:125-128
- Hessler, L.E.; Simmons, C.R.; and Lane, H.C
1957. The effect of temperature on the physical and chemical development of cotton fiber. *Text Res. Journ.* 27 412-416.
- Hessler, L.E.; Simpson, M.E.; and Berkley, E.E.
1948. Degree of polymerization, spiral structure and strength of cotton fiber. *Text Res. Journ* 18:679-683.
- Heydecker, W.; Higgins, J.; and Gulliver, R.L
1973. Accelerated germination by osmotic seed treatment. *Nature* 246:42-44
- Heydecker, W.; Higgins, J ; and Turner, Y.J.
1975. Invigoration of seeds? *Seed Sci. and Technol.* 3:881-888
- Hibbard, R.P., and Miller, E.V.
1928. Biochemical studies on seed viability I. Measurements of conductance and reduction. *Plant Physiol.* 3:335-352
- Hicklenton, P.R., and Jolliffe, P.A.
1978. Effects of greenhouse CO₂ enrichment on the yield and photosynthetic physiology of tomato plants. *Can. J. Plant Sci.* 58.801-817.
- Hicklenton, P.R., and Jolliffe, P.A
1980a. Alterations in the physiology of CO₂ exchange in tomato plants grown in CO₂-enriched atmospheres. *Can. J. Bot.* 58:2181-2189
- Hicklenton, P.R , and Jolliffe, P A
1980b. Carbon dioxide and flowering in *Pharbitis nil* Choisy. *Plant Physiol.* 66 13-17

- Hill, A.C.; Pack, M.R.; Treshow, M.; Downs, R.J.; and Transtrum, L.G.
1961. Plant injury induced by ozone. *Phytopath.* 51:356-363.
- Hill, R., and Bendall, F.
1960. Function of the two cytochrome components in chloroplasts: A working hypothesis. *Nature* 186:136-137.
- Hillel, D., van Beek, C.G.E.M., and Talpaz, H.
1975. A microscope-scale model of soil water uptake and salt movement to plant roots. *Soil Sci.* 120:385-399.
- Hilton, J.L.; St. John, J.B.; Christiansen, M.N.; and Norris, K.H.
1971. Interaction of lipoidal materials and a pyridazinone inhibitor of chloroplast development. *Plant Physiol.* 48:171-177.
- Hintz, G.D., and Green, J.H.
1954. Components of earliness in upland cotton varieties. *Agron. J.* 46:114-118
- Hiron, R.W.P., and Wright, S.T.C.
1973. The role of endogenous abscisic acid in the response of plants to stress. *J. Exp. Bot.* 24:769-781.
- Hirs, C.H.W.
1967. Determination of cystine as cysteic acid. *In* C.H.W. Hirs (ed.), *Methods in Enzymology* XI:59-62. Acad. Press, New York.
- Hiyama, T., and Ke, B.
1971. A new photosynthetic pigment "P430." Its possible role as the primary electron acceptor of photosystem I. *Proc. Natl. Acad. Sci. USA* 68:1010-1013.
- Ho, L.C.
1977. Effects of CO₂ enrichment on the rates of photosynthesis and translocation of tomato leaves. *Ann. Appl. Biol.* 87:191-200.
- Ho, L.C.
1978. The regulation of carbon transport and the carbon balance of mature tomato leaves. *Ann. Bot.* 42:155-164.
- Hock, C.W.; Ramsay, R.C.; and Harris, M.
1941. *Text Res. Journ.* 11:200 (in Kerr, 1946)
- Hoffman, G.J., and Phene, C.J.
1971. Effect of constant salinity levels on water use efficiency of bean and cotton. *Trans. Amer. Soc. Agric. Eng.* 1103-1106.
- Hoffman, G.J., and Rawlings, S.L.
1970. Infertility of cotton flowers at both high and low relative humidities. *Crop Sci.* 10:721-723.
- Hoffman, G.J.; Rawlins, S.L.; Garber, M.J.; and Cullen, E.M.
1971. Water relations and growth of cotton as influenced by salinity and relative humidity. *Agron. J.* 63:822-826.
- Hoffpauir, C.L.; Petty, D.H.; and Guthrie, J.D.
1947. Germination and free fatty acid in individual cotton seeds. *Science* 106:344.
- Hoffpauir, C.L.; Poe, S.E.; Wiles, L.U.; and Hicks, M.
1950. Germination and free fatty acids in seed stock lots of cotton seed. *J. Amer. Oil Chem.* 9:347-348.
- Hofmann, W.C., and Taylor, B.B.
1980. An evaluation of field weathering and late-set bolls on the quality of cotton planting seed. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 39-40.
- Hofstra, G., and Hesketh, J.D.
1975. The effects of temperature and CO₂ enrichment on photosynthesis in soybean. *In* R. Marcelle (ed.), *Environmental and Biological Control of Photosynthesis*, pp. 71-80. Junk, The Hague.
- Holekamp, E.R.; Hudspeth, E.B.; and Ray, L.L.
1960. Soil temperature—A guide to timely cotton planting. *Texas Agric. Exp. Sta. MP.* pp. 465.

- Holley, W.D.
1970. CO₂ enrichment for flower production. *Trans. Amer. Soc. Agr. Eng.* 13:257-258
- Holmgren, P.; Jarvis, P.G.; and Jarvis, M.S.
1965. Resistance to carbon dioxide and water vapor transfer in leaves of different plant species. *Physiol. Plant.* 18:557-573
- Hood, J.T., and Ensminger, L.E.
1964. The effect of ammonium phosphate and other chemicals on the germination of cotton and wheat seeds. *Proc. Soil Sci. Soc. Am.* 28:251-253.
- Hopen, H.J., and Ries, S.K.
1962. The mutually compensating effect of carbon dioxide concentrations and light intensities on the growth of *Cucumis sativus* L. *Proc. Amer. Soc. Hort. Sci.* 81:358-364.
- Hopkins, A.R., and More, R.F.
1980. Thidiazuron: Effect of application on boll weevil and bollworm population densities, leaf abscission, and growth of the cotton plant. *J. Econ. Entomol.* 73:768-770.
- Hopper, N.W.
1981. Significance and evaluation of vigor. *Proc. Beltwide Cotton Prod. Res. Conf.* 1981:312-314
- Hopper, N.W., and Hinton, H.R.
1980. Use of electrical conductivity as a measure of cottonseed quality. *Agron. Abstr.* 1980:109
- Horowitz, H.
1962. Influence des conditions du milieu sur la formation et la chute des organes floraux chez le cotonnier. *Coton et Fibres Trop.* 17:23-40.
- Horrocks, R.D.; Kerby, T.A.; and Buxton, D.R.
1978. Carbon source for developing bolls in normal and superokra leaf cotton. *New Phytol.* 80:335-340.
- Horton, R.F.
1971. Stomatal opening. The role of abscisic acid. *Can. J. Bot.* 49:583-585
- Horton, R.F., and Osborne, D.J.
1967. Senescence, abscission and cellulase activity in *Phaseolus vulgaris*. *Nature (London)* 214:1086-1088.
- Hou, L.A.; Hill, A.C.; and Soleimani, A.
1977. Influence of CO₂ on the effects of SO₂ and NO₂ on alfalfa. *Environ. Pollut.* 12:7-16
- Howell, C.R., Bell, A.A.; and Stipanovic, R.D.
1976. Effect of aging on flavonoid content and resistance of cotton leaves to *Verticillium* wilt. *Physiol. Plant. Pathol.* 8:181-188.
- Hoyt, D.V.
1979. An empirical determination of the heating of the earth by the carbon dioxide greenhouse effect. *Nature* 282:388-390.
- Hsi, D.C., and Reeder, H.M.
1953. Dormancy of upland and American-Egyptian cotton seed. *Agron. J.* 45:454
- Hsiao, T.L.
1973. Plant responses to water stress. *Ann. Rev. Plant Physiol.* 24:519-570.
- Hsu, C.L., and Stewart, J. McD.
1976. Callus induction by (2-chloroethyl) phosphonic acid on cultured cotton ovules. *Physiol. Plant.* 36:150-153.
- Hsu, C.L., and Stewart, J. McD.
1979. Initiation of ovular callus and growth of cells in suspension of *Gossypium arboreum* L. *Proc. Beltwide Cotton Prod. Res. Conf., Nat. Cotton Council, Memphis, TN* pp. 44.
- Hubbard, J.W.
1931. Farm study of the cotton plant. *USDA Farmers Bull.* #1661. pp. 17
- Huber, S.C.
1981a. Inter- and intra-specific variation in photosynthetic formation of starch and sucrose. *Z. Pflanzenphysiol.* 102:443-450.

- Huber, S.C.
1981b. Interspecific variation in activity and regulation of leaf sucrose phosphate synthetase. *Z Pflanzenphysiol.* 102:443-450
- Huber, S.C.
1983. The role of sucrose phosphate synthetase in partitioning of carbon in leaves. *Plant Physiol.* 71:818-821.
- Huber, S.C., and Israel, D.W.
1982. Biochemical basis for partitioning of photosynthetically fixed carbon between starch and sucrose in soybean (*Glycine max* Merr.) leaves. *Plant Physiol.* 69:691-696
- Huber, S.C.; Kerr, P.S.; Rufty, T.R., Jr.; Rogers, H.H.; and Israel, H.H.
1982. B. Photosynthesis and carbohydrate metabolism in soybean leaves as affected by CO₂ enrichment. In H.H. Rogers, G.E. Bingham, *et al.* (eds.), *Response of Vegetation to Carbon Dioxide*. Progress Report No. 009. pp. 74-103.
- Huck, M.G.
1970. Variation in taproot elongation rate as influenced by composition of the soil air. *Agron. J.* 62:815-818.
- Hudspeth, E.B., and Jones, D.L.
1954. Emergence and yield of cotton as affected by depth of covering seed. *Texas Agr. Exp. Sta. Prog. Report* 1688.
- Huelsen, W.A., and Brown, W.N.
1952. Physical damage to sweet corn seed. *Ill Agr. Exp. Sta. Bull.* 561.
- Hughes, D.W., and Galau, G.A.
1984. Addition of proteins to the cylindrical gel embedding medium for transverse molecular weight markers in two dimensional gel electrophoresis. *Anal. Biochem.* 140:320-325.
- Hughes, L.C.
1966. Factors affecting numbers of ovules per loculus in cotton. *Emp. Cotton Grow. Rev.* 43:273-285.
- Hughes, L.C.
1968. Motes in varieties of *Gossypium barbadense*. *Cotton Grow. Rev.* 45:266-280.
- Hulme, A.C.; Rhodes, M.J.C.; Galliard, T., and Wooltorton, L.S.C.
1968. Metabolic changes in excised fruit tissue IV Changes occurring in discs of apple peel during the development of the respiration climacteric. *Plant Physiol.* 43:1154-1161.
- Hunter, R.E.
1974. Inactivation of pectic enzymes by polyphenols in cotton seedlings of different ages infected with *Rhizoctonia solani*. *Physiol. Plant Pathol.* 4:151-159.
- Hunter, R.E.
1978. Effects of catechin in culture and in cotton seedlings on the growth and polygalacturonase activity of *Rhizoctonia solani*. *Phytopath.* 68:1032-1036.
- Hunter, R.E.; Halloin, J.M.; Veech, J.A.; and Carter, W.W.
1978a. Exudation of terpenoids by cotton roots. *Plant and Soil* 50:237-240.
- Hunter, R.E.; Halloin, J.M.; Veech, J.A.; and Carter, W.W.
1978b. Terpenoid accumulation in hypocotyls of cotton seedlings during aging and after infection by *Phizoctoma solani*. *Phytopath.* 68:347-350.
- Hunter, R.E., and Presley, J.T.
1963. Morphology and histology of pinched root tips of *Gossypium hirsutum* L. seedlings grown from deteriorated seeds. *Can. J. Plant. Sci.* 43:146-150.
- Hurd, R.G.
1968. Effects of CO₂ enrichment on the growth of young tomato plants in low light. *Ann. Bot.* 32:531-542.
- Hutchison, J.B.
1959. *The Application of Genetics to Cotton Improvement*. Cambridge Univ. Press. Cambridge, England.

- Hutchison, J.B.; Silow, R.A.; and Stephens, S.G.
1947 *The Evolution of Gossypium and the Differentiation of the Cultivated Cottons*. Oxford University Press, London.
- Hutmacher, R.B., and Krieg, D.R.
1981. Photosynthesis: Transpiration ratios in cotton. Proc. Beltwide Cotton Prod. Res. Conf. 35:52-53
- Hutmacher, R.B., and Krieg, D.R.
1982 Stomatal and non-stomatal inhibition of photosynthesis in cotton. Proc. Beltwide Cotton Prod. Res. Conf. 36:50
- Hutton, D., and Stumpf, P.K.
1969. Fat metabolism in higher plants. XXXVII. Characterization of the β -oxidation systems from maturing and germinating castor bean seeds. *Plant Physiol.* 44:508-516.
- Huwylar, H.R.; Franz, G.; and Meier, H.
1978 β -1, 3-glucans in the cell walls of cotton fibers (*Gossypium aboreum*). *Plant Sci. Lett.* 12:55-62
- Huwylar, H.R.; Franz, G., and Meier, H.
1979. Changes in the composition of cotton fiber cell walls during development. *Planta* 146:635-642.
- Hyer, A.H.; Carter, L.M., Garber, R.H.; and Ferguson, D.L.
1980. Cottonseed germination evaluation by measuring electrical conduction of seed exudate. Proc. Beltwide Cotton Prod. Res. Conf. 1980:80.

I

- Idso, S.B.
1980. The climatological significance of a doubling of earth's atmospheric carbon dioxide concentration. *Science* 207:1462-1463.
- Idso, S.B.
1982. An empirical evaluation of Earth's surface air temperature response to an increase in atmospheric carbon dioxide concentration. *In* AIP Conference Proc. No. 82 "Interpretation of climate and Photochemical Models, Ozone and Temperature Measurements." R.A. Reek and J.R. Hummel (eds.), American Institute of Physics, New York, pp. 119-124.
- Idso, S.B.
1983. Carbon dioxide and global temperature: What the data show. *J. Env. Qual.* 12:159-163.
- Ihle, J.N., and Dure, L.S., III
1969. Synthesis of a protease in germinating cotton cotyledons catalyzed by mRNA synthesized during embryogenesis. *Biochem. Biophys. Res. Commun.* 36:705-710
- Ihle, J.N., and Dure, L.S., III
1970. Hormonal regulation of translation inhibition requiring RNA synthesis. *Biochem. Biophys. Res. Comm.* 38:995-1001.
- Ihle, J.N., and Dure, L.S., III
1972. The developmental biochemistry of cottonseed embryogenesis and germination. III. Regulation of the biosynthesis of enzymes utilized in germination. *J. Biol. Chem.* 247:5048-5055
- Imai, K., and Murata, Y.
1976. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. I. Effects on leaf area, dry matter, tillering, dry matter distribution ratio, and transpiration. *Proc. Crop Sci. Japan* 45:598-606.
- Imai, K., and Murata, Y.
1977. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. II. Specific and varietal differences in the response of dry matter production. *Japan J. Crop Sci.* 46:291-297.

- Imai, K., and Murata, Y.
1978a. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. III. Relationship between CO₂ concentration and nitrogen nutrition in some C₃- and C₄-species. Japan J. Crop. Sci. 47:118-123.
- Imai, K., and Murata, Y.
1978b. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. IV. After-effects of carbon dioxide treatments on the apparent photosynthesis, dark respiration and dry matter production. Japan J. Crop Sci. 47:330-335
- Imai, K., and Murata, Y.
1979a. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. VI. Effect of oxygen concentration on the carbon dioxide-dry matter relationship in some C₃ and C₄ crop species. Japan J. Crop Sci. 48:58-65.
- Imai, K., and Murata, Y.
1979b. Effect of carbon dioxide concentration on growth and dry matter production of crop plants. VII. Influence of light intensity and temperature on the effect of carbon dioxide enrichment in some C₃ and C₄ species. Japan J. Crop Sci. 48:409-417.
- Imazu, T.; Yabuki, K.; and Oda, Y.
1965. The mutually compensating effect of carbon dioxide concentration and solar radiation on the growth of leaf beet. J. Ag. Meteor. 21:41-46.
- Ingram, P.; Woods, D.K.; Peterlin, A.; and Williams, J.L.
1974. Never-dried cotton fibers. Part I: Morphology and Transport Properties. Text. Res. Journ. 44:96-105.
- Innes, N.L.
1974. Genetic variability for lint quality in upland cotton. Cotton Grow. Rev. 51:85-98.
- Irvine, J.E.
1957. Studies on the development of ovules of *Gossypium hirsutum* and *G. klotzschianum* v. *davidsonii* and their failure in interspecific crosses. Ph D. Dissertation. Univ. Virginia.
- Isely, D.
1957. Vigor tests. Proc. Assoc. Off. Seed Anal. 47:176-182.
- Ishihara, K.; Ebara, H.; Hirasawa, T., and Ogura, T.
1978. The relationship between environmental factors and behaviour of stomata in the rice plants. VII. The relation between nitrogen content in leaf blades and stomatal aperture. Japan J. Crop Sci. 47:664-673.
- Ishihara, K.; Iida, O.; Hirasawa, T.; and Ogura, T.
1979a. Relationship between nitrogen content in leaf blades and photosynthetic rate of rice plants with reference to stomatal aperture and conductance. Japan J. Crop Sci. 48:543-550.
- Ishihara, K.; Kuroda, E.; Ishii, R.; and Ogura, T.
1979b. Relationship between nitrogen content in leaf blades and photosynthetic rate in rice plants measured with an infrared gas and analyzer and an oxygen electrode. Japan J. Crop Sci. 48:551-556.
- Isings, J.
1964. The influence of stress and deformation on the structure of the cotton fiber. Text. Res. Journ. 34:236-246.
- Ishy, D.
1950. The Cold Test for Corn. Proc. Intern. Seed Test. Assoc. 16:299-311.
- Ito, T.
1973. Plant growth and physiology of vegetable plants as influenced by carbon dioxide environment. Trans. Fac. Hort., Chiba Univ. 7:1-134.
- Ito, T.
1976. A guide to CO₂ fertilization for vegetable crops. Seibundo-Shinkosha, Tokyo. pp. 1-116.
- Iyengar, N.K.
1938. Pollen-tube studies in *Gossypium hirsutum*. J. Genet. 37:69-107

- Iyengar, R.L.N.
1939 Variations in the measurable characters of cotton fiber I. Variation with respect to the length of the fiber. The Ind. Jnl. of Agr. Sci., IX:305-327
- Iyengar, R.L.N.
1941a. Variation in the measurable characters of cotton fibers. II. Variation among seeds within a lock. The Ind. Jnl. of Agr. Sci. XI:703-735
- Iyengar, R.L.N.
1941b. Variation in the measurable characters of cotton fibers III. Variation of maturity among the different regions of the seed surface The Ind. Jnl. of Agr. Sci. XI:866-875
- Iyengar, R.L.N.
1947 Variation of fiber length in a sample of cotton The Ind. Cotton Grow. Rev. 1:179-183.
- Iyengar, R.L.N.
1961. Cotton fiber weigh distribution (3). Text Res. Journ 31 177-178.

J

- Jacks, T.J.; Barker, R.H., and Wiegand, O.E., Jr.
1973. Conformations of oilseed storage proteins (globulins) determined by circular dichroism J Peptide Protein Research. 5:289-291.
- Jacks, T.J., Neucere, N.J., and McCall, E.R.
1975. Thermally induced permutations of arachin (peanut globular protein) J. Peptide Protein Res. 7 153-157.
- Jackson, E.B., and Tilt, P.A.
1968. Effects of irrigation intensity and nitrogen level on the performance of eight varieties of upland cotton, *Gossypium hirsutum* L. Agron. J. 60:13-17.
- Jackson, J.E., and Fadda, N.R.
1962 Effects of gibberellic acid on the flowering and fruiting of *Gossypium barbadense*. Empire Cotton Growing Rev. XXXIX:125-130.
- Jackson, M.B., and Osborne, D.J.
1972. Abscisic acid, auxin, and ethylene in explant abscission. J Exp Bot. 23 849-862
- Jarvis, P.G.
1971. The estimation of resistances to carbon dioxide transfer. In Z. Sestak, J. Catsky, and P.G. Jarvis (eds.), Plant Photosynthetic Production: Manual of Methods, pp. 566-631. W. Junk. The Hague.
- Jarvis, P.G., and Mansfield, T.A.
1980. Reduced stomatal responses to light, carbon dioxide and abscisic acid in the presence of sodium. Plant Cell and Environ. 3:279-283.
- Jasdanwala, R.T.; Singh, Y.D.; and Chinoy, J.J.
1977 Auxin metabolism in developing cotton hairs J. Exp Bot. 28:1111-1116
- Jensen, C.O.; Sacke, W.; and Boldauski, F.A.
1951. The reduction of triphenyl tetrazolium chloride by dehydrogenases of corn embryos Science 113:6566.
- Jensen, R.G., and Bahr, J.T.
1977 Ribulose 1,5-biphosphate carboxylase/oxygenase. Ann. Rev. Plant Physiol. 28 379-400.
- Jensen, W.A.
1963. Cell development during plant embryogenesis. Brookhaven Symposium in Biology. 16 179-202.
- Jensen, W.A.
1965. The ultrastructure and composition of the egg and central cell of cotton. Amer. J. Bot 52.781-797
- Jensen, W.A.
1968a. Cotton embryogenesis: The zygote. Planta 79.346-366.

- Jensen, W.A.
1968b. Cotton embryogenesis: The polysome formation in the zygote. *J. Cell. Biol.* 36:403-406.
- Jensen, W.A., and Fisher, D.B.
1967. Cotton embryogenesis: Double fertilization. *Phytomorph.* 17:261-269.
- Jensen, W.A., and Fisher, D.B.
1968. Cotton embryogenesis: The sperm. *Protoplasma* 65:277-286.
- Jensen, W.A.; Fisher, D.B.; and Ashton, M.E.
1968. Cotton embryogenesis: The pollen cytoplasm. *Planta* 81:206-228.
- Jensen, W.A.; Schulz, P.; and Ashton, M.E.
1977. An ultrastructural study of early endosperm development and synergid changes in unfertilized cotton ovules. *Planta* 133:179-189.
- Joham, H.E.
1952. Accumulation and distribution of molybdenum in the cotton plant. *Plant Physiol.* 28:275-280.
- Joham, H.E.
1955. The calcium and potassium nutrition of cotton as influenced by sodium. *Plant Physiol.* 30:4-10.
- Joham, H.E.
1957. Carbohydrate distribution as affected calcium deficiency in cotton. *Plant Physiol.* 32:113-117.
- Joham, H.E.
1974. The regulation of photosynthetically fixed carbon translocation by calcium and sodium. *Proc. Cotton Defol.-Phy. Conf.* 28:35.
- Joham, H.E., and Amin, J.V.
1965. Role of sodium in the potassium nutrition of cotton. *Soil Sci.* 99:220-226.
- Joham, H.E., and Amin, J.V.
1967. The influence of foliar and substrate applications of manganese on cotton. *Plant and Soil* 26:369-379.
- Joham, H.E., and Johanson, L.
1973. The effect of sodium and calcium on the translation of ¹⁴C-sucrose in excised cotton roots. *Physiol. Plant.* 28:121-126.
- Joham, H.E., and Parekh, M.C.
1970. The tolerance of two varieties of cotton to high levels of Na and Mg. *Proc. Beltwide Cotton Prod. Res. Conf., Nat'l Cotton Coun., Memphis, TN.* pp. 35.
- Joham, H.E., and Rowe, V.
1975. Temperature and zinc interactions on cotton growth. *Agron. J.* 67:313-317.
- Johansson, N.
1932. A field experiment with the growth of sugar-beets at different carbon dioxide content of the air. *Svensk Botanisk Tidskrift* 26:70-75.
- Johnson, B., and Wadleigh, C.H.
1939. Certain ecological factors and the cotton plant. *Arkansas Agr. Exp. Sta., Bull.* 376.
- Johnson, B.L., and Thien M.M.
1970. Assessment of evolutionary affinities in *Gossypium* by protein electrophoresis. *Amer. J. Bot.* 59:1081-1092.
- Johnson, J.R.
1970. Relation of bulk density of acid delinted cottonseed to performance in laboratory and field tests. MS Thesis, Mississippi State University, Miss. State, MS. pp. 64.
- Johnson, J.R.; Baskin, C.C.; and Delouche, J.C.
1973. Relation of bulk density of acid delinted cottonseed to field performance. *Proc. Assoc. of Off. Seed Anal.* 63:63-66.
- Johnson, P., and Shooter, E.M.
1950. The globulins of the groundnut (*Arachis hypogaea*). I. Investigation of arachin as a dissociation system. *Biochim. Biophys. Acta* 5:361-375.

- Johnson, R.E.
1966. Influence of leaf area on fruiting and yield of cotton. Proc. Beltwide Cotton Prod. Res. Conf. pp. 236-237.
- Johnson, R.E., and Addicott, F.T.
1967. Boll retention in relation to leaf and boll development in cotton. Crop Sci. 7:571-574.
- Joliffe, P., and Kok, B.
1975. Oxygen evolution in photosynthesis. In Govindjee (ed.), Bioenergetics of Photosynthesis, pp. 387-412. Acad. Press, NY.
- Jolliffe, P.A., and Tregunna, E.B.
1968. Effect of temperature, CO₂ concentration, and light intensity on oxygen inhibition of photosynthesis in wheat leaves. Plant Physiol. 43:902-906.
- Jones, H.G.
1973. Moderate-term water stresses and associated changes in some photosynthetic parameters in cotton. New Phytol. 72:1095-1105.
- Jones, H.G.
1978. How plants respond to stress. Nature 271:610.
- Jones, J.K., Jiriden, G.M., and Slayter, G.A.
1974. Gas-acid delinting of cotton planting seed. Cotton Inc., Memphis, TN. Special Research Report. April, 1974. pp. 15.
- Jones, J.K.
1976. New methods in seed cotton handling. In Public-Supported Cotton Research, Proc. Conf. Collab. South. Agr. Exp. Sta., New Orleans, La., April 2-3, 1973. U.S. Dept. Agr. Res. Serv. ARS-S70, pp. 31-33.
- Jones, J.K.
1980. Acid delinting cottenseed for oil milling and cubic acid delinted hulls. Oil Mill Gaz. Sept., 1980. pp. 11-22.
- Jones, J.K., and Slater, G.A.
1976. Dilute sulfuric acid cotton planting seed delinting process. Cotton, Inc., Memphis, TN. Agro-Industrial Rept. 3:1-26.
- Jones, J.W.; Brown, L.G.; and Hesketh, J.
1980. COTCROP: A computer model for cotton growth and yield. In J.D. Hesketh and J.W. Jones (eds.), Predicting Photosynthesis for Ecosystem Models. Vol. II. pp. 209-241. CRC Press, Boca Raton, Florida.
- Jones, J.W.; Colwick, R.F.; Barker, G.L.; and McClendon, R.W.
1977. Optimum time for harvesting cotton: A new concept. Am. Soc. Agric. Eng. Trans. 22:291-296.
- Jones, M.M., and Rawson, H.M.
1979. Influence of rate of development of leaf water deficits upon photosynthesis, leaf conductance, water use efficiency, and osmotic potential in sorghum. Physiol. Plant. 45:103-111.
- Jones, P.H., Allen, L.H., Jr.; Jones, J.W.; and Valle, R.
1985. Photosynthesis and transpiration responses of soybean canopies to short-and-long-term CO₂ treatments. Agron. Jour. 77:119-126.
- Jones, R.L.
1973. Gibberellins: Their physiological role. Ann. Rev. Plant Physiol. 24:571-598.
- Joo, P.K.; Orman, B.A.; Moustafa, A.M.; and Hafsdahl, M.P.
1980. Can leucate electroconductivity be a useful tool for corn seed emergence potential evaluation? Agron. Abstr. 1980:109.
- Jordan, E.G., and Chapman, J.M.
1973. Nucleolar and nuclear envelope ultrastructure in relations to cell activity in discs of carrot root (*Daucus carota* L.). J. Exp. Bot. 24:197.
- Jordan, W.R.
1970. Growth of cotton seedlings in relation to maximum daily leaf-water potential. Agron. J. 62:699-701.

- Jordan, W.R.
1979. Influence of edaphic parameters on flowering, fruiting, and cutout. A. Role of plant water deficit. *In Cotton Physiology—A Treatise*. Proc. Beltwide Cotton Prod. Res. Conf. pp. 297-301.
- Jordan, W.R.
1982. Water relations of cotton. *In I.D. Teare and M.M. Peets (eds.) Crop Water Relation*. Wiley Interscience, New York.
- Jordan, W.R.; Brown, K.W.; and Thomas, J.C.
1975. Leaf age as a determinant in stomatal control of water loss from cotton during water stress. *Plant Physiol.* 56:595-599.
- Jordan, W.R.; Morgan, P.W.; and Davenport, T.L.
1972. Water Stress enhances ethylene-mediated leaf abscission in cotton. *Plant Physiol.* 50:756-758.
- Jordan, W.R., and Ritchie, J.T.
1971. Influence of soil water stress on evaporation, root absorption and internal water status of cotton. *Plant Physiol.* 48:783-788.
- Joshi, P.C.
1960. *In Vitro* growth of cotton ovules. Symposium on Plant Embryology. Council of Scientific and Industrial Research, New Delhi. pp. 199-204.
- Joshi, P.C., and Johri, B.M.
1972. *In vitro* growth of ovules of *Gossypium hirsutum*. *Phytomorph.* 22:195-209.
- Joshi, P.C., and Pundir, N.S.
1966. Growth of ovules in the cross *Gossypium arboreum* x *G. hirsutum* *in vivo* and *in vitro*. *Indian Cotton J.* 20:23-29
- Joshi, P.C.; Wadhvani, A.M., and Johri, B.M
1967. Morphological and embryological studies of *Gossypium* L. *Proc. Nat. Inst. Sci. India* 33:37-93.
- Justice, N; Lee, L.H.; Dick, J.B. and Christensen, M.N.
1965. Effect of gravity separation on cotton seed. *Miss. Farm Res.* 28.No. 3.
- Justus, N.
1965. Effect of gravity separation on cotton seed. *Miss. Agr. Exp. Sta. Inf. Sheet* 880.

K

- Kaiser, F.E.; Gehrke, C.W.; Zumwalt, R.W.; and Kuo, K.C.
1974. Amino acid analysis. Hydrolysis ion-exchange cleanup, derivatization, and quantitation by gas-liquid chromatography. *J. Chromatog.* 94:113-133.
- Kajimoto, G; Yoshida, H.; Shibahara, A.; and Yamashoji, S.
1979. Changes in the composition of lipids and fatty acids in cottonseeds during maturation. *Nippon Nogeikagaku Kaishi* 53:317-320.
- Kamalay, J.C., and Goldberg, R.B.
1983. Organ specific nuclear RNAs in tobacco. *Proc. Natl. Acad. Sci. USA.* 81:2801-2805.
- Karami, E.; Krieg, D.R.; and Quisenberry, J.E.
1980. Water relations and carbon-14 assimilation of cotton with different leaf morphology. *Crop Sci.* 20:421-426
- Kassenbeck, P
1970. Bilateral structure of cotton fibers as revealed by enzymatic degradation. *Text. Res. J.* 40:330-334.
- Katterman, F.R.; Williams, M.D., and Clay, W.F.
1977. The influence of a strong reducing agent upon the initiation of callus from the germinating seedlings of *Gossypium barbadense*. *Physiol. Plant.* 40:98-100.

- Kaufman, Z.; Netzer, D.; and Barash, I.
1981. The apparent involvement of phytoalexins in the resistance response of cotton plants to *Fusarium oxysporum* f. sp. *vasinfectum*. *Phytopath. Z.* 102:178-182.
- Kearney, T.H.
1926. Correlations of seed, fiber, and boll characteristics in cotton. *J. Agric. Res.* 33:781-796.
- Kechagia-Michailidou, U.
1977. Cotton fiber technological characteristics are predetermined by cytological events at anthesis. Ph.D. Dissertation.
- Keeling, C.D.
1970. Atmospheric carbon dioxide: Long term trends (unpublished background paper for SCEP). Cited in *Man's Impact on the Global Environment*, pp. 50. Report of the Study of the Critical Environmental Problems (SCEP). MIT Press, Massachusetts. pp. 318.
- Keeling, C.D., and Bacastow, R.B.
1977. Impact of industrial gases on climate. *In Energy and Climate: Outer Limits to Growth*, pp. 110-160. National Academy of Sciences Geophysical Research Board, Geophysical Study Committee.
- Keeling, C.D., Bacastow, R.B.; Bainbridge, A.E.; Ekdahl, C.A., Jr.; Guenther, P.R.; Waterman, L.S.; and Chin, J.F.S.
1976. Atmospheric carbon dioxide variations at Mauna Loa Observatory. *Hawaii Tellus* 28:538-551.
- Keillogg, W.W., and Schwere, R.
1981. *Climate Change and Society: Consequences of Increasing Atmospheric Carbon Dioxide*. Westview Press, Boulder, Colorado. pp. 178.
- Kefeli, V.I., and Kutacek, M.
1977. "Phenolic substances and their possible role in plant growth regulation" *In Plant growth regulation*, P.E. Pilet (ed.), pp. 181-188.
- Keith, G.
1972. The challenge in producing seed quality soybeans. *In Grain Damage Symposium*, D. Byg, Chm. Ohio State University, Columbus, Ohio. pp. 53-57.
- Kelly, G.J., and Latzko, E.
1976. Regulatory aspects of photosynthetic carbon metabolisms. *Ann. Rev. Plant Physiol.* 27:181-205.
- Kepner, R.A., and Curley, R.G.
1976. Handling seed cotton modules without pallets. Costs of hauling from field to storage. *Calif. Agric.* 30:6-8.
- Kerby, T.A., and Buxton, D.R.
1978. Effect of leaf shape and plant population on rate of fruiting position appearance in cotton. *Agron. J.* 70:535-538.
- Kerby, T.A.; Wilson, L.T.; and Jackson, S.
1985. Upper thresholds required for heat unit calculations for cotton growth in the Far West. *Proc. Beltwide Cotton Res. Conf.*, Jan. 4-6, 1985 New Orleans, LA. pp. 366-368.
- Kerr, R.A.
1977. Carbon dioxide and climate: Carbon budget still unbalanced. *Science* 197:1352-1353.
- Kerr, T.
1937a. The structure of the growth rings in the secondary wall of cotton hairs. *Protoplasma* 27:229-240.
- Kerr, T.
1937b. The visible structure of natural fibers. Presented at the convention of the Technical Association of the Pulp and Paper Industry at Savannah, Georgia, Oct. 18-20.
- Kerr, T.
1946. The outer wall of the cotton fiber and its influence on fiber properties. *Text. Res. Journ.* 16:249-254.

- Khan, A.A.
1980/81. Hormonal regulation of primary and secondary seed dormancy. *Isr. J. Bot.* 29:207-224.
- Khan, A.A.; Braun J.W.; Tao, K.L.; Miller, W.F.; and Bensin, R.F.
1976. Methods for maintaining seed vigor and improving performance. *J. Seed Tech.* 1:33-57.
- Khasanov, M.M., and Butenko, R.G.
1979. Cultivation of isolated protoplasts from cotyledons of cotton (*Gossypium hirsutum*) Soviet Plant Physiol. 26:77-81.
- Khaund, R.N.
1971. A study of the separation of coconut protein isolates and of some of their physical and chemical characteristics. Dissertation. Texas A&M University, College Station, Texas.
- Kilburn, K H
1974. Acute bronchitis due to cotton plant polyphenols. *Ann. N.Y. Acad. Sci.* 221:335-339.
- Kilburn, K.H.; Lynn, D.G., McCormick, J.P.; and Schafer, T R.
1979. Effects of synthetic lacinlene C 7-methyl ether on hamster airways. Proc. Third Special Session on Cotton Dust Res., Beltwide Cotton Prod. Res. Conf. pp. 19-20
- Kilburn, K H; Lynn, W.S.; Tres, L.L.; and McKenzie, W.N.
1973. Leukocyte recruitment through airway walls by condensed vegetable tannins and quercetin. *Lab. Invest.* 28:55-59.
- Kimball, B.A., and Idso, S.B.
1982. Increasing Atmospheric CO₂: Effects on Crop Yield, Water Use, and Climate. Proceedings Plant Production and Management Under Drought Conditions. Tulsa, Oklahoma, October 4-6, 1981.
- Kimball, B.A., and Mitchell, S.T
1978. CO₂ enrichment of tomatoes in unventilated greenhouses in an arid climate. *Acta Hort.* 87:131-137.
- Kimball, B A , and Mitchell, S.T.
1979. Tomato yields from CO₂-enrichment in unventilated and conventionally ventilated greenhouses. *J. Amer. Soc. Hort. Sci.* 104:515-520.
- Kimball, B.A., and Mitchell, S.T
1981. Effects of CO₂ enrichment, ventilation, and nutrient concentration on the flavor and vitamin content of tomato fruit. *HortSci.* 16:665-666
- Kimball, B A , and Mitchell, S.T.
1982. Carbon dioxide and agricultural yield: An assemblage and analysis of 430 prior observation. WCL Report.
- Kindl, H.
1982. Glyozysome biogenesis via cytoplasmic pools in cucumber. *Proc. N.Y. Acad. Sci.* 386:314-328.
- King, C.C.; Ni, T.S; Tank, Y.W.; Cheng, C.W.; Chang, C.L.; Lu, S.F.; Lui, W.Y.; and Lee, S.G.
1956. The role of organic food substances in the boll shedding of cotton plant. *Acta Botanica Sinica* 5:101-102.
- King, C.J
1930 Development of axillary buds on fruiting branches of Pima and upland cotton. *J. Agric. Res* 41:697-714.
- King, C.J., and Loomis, H.F.
1932. Agricultural investigations at the U.S. Field Station, Sacaton, Arizona. 1925-1930. U.S. Dept. Agr. Cir. No. 206.
- King, E.E., and Lamlin, G.E.
1979. Uniform quality cotton seed for laboratory and field use. Proc. Beltwide Cotton Prod. Res. Conf pp 32
- King, E.E , and Leffler, H R.
1979. Nature and patterns of proteins during cotton seed development. *Plant Physiol.* 63:260-263.

King, R.W.

1982. Abscisic acid in seed development. *In* The Physiology and Biochemistry of Seed Development, Dormancy and Germination. A. A. Khan (ed.), Elsevier Biomedical Press, Amsterdam

Kinsinger, W.G., and Hock, C.W.

1948 Electron microscopical studies of natural cellulose fibers. *Ind. Eng. Chem.* 40:1711-1716.

Kirby, B.W., and Stelzer, L.R.

1968. Paraquat as a harvest-aid chemical: Effect on lint and seed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 68.

Kirk, I.W., and McLeod, H.E.

1967 Cottonseed rupture from static load and impact velocity. *Trans. of the ASAE.* 10:217-219

Kirk, T.G., and Krieg, D.R.

1982 Source-sink relations of cotton: Carbon assimilation and partitioning. *Proc. Beltwide Cotton Prod. Res. Conf.* 36:50.

Kitamura, K., and Shibasaki, K.

1975. Isolation and some physico-chemical properties of the acidic subunits of soybean 11S globulin. *Agr. Biol. Chem.* 39:945-951.

Kittock, D.L., and Arle, H.F.

1977. Termination of late season cotton fruiting with plant growth regulators. *Crop Sci.* 17:320-324

Kittock, D.L.; Arle, H.F.; and Bariola, L.A.

1974 Current status of chemical termination of cotton fruiting. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 55-56.

Kittock, D.L.; Arle, H.F.; and Bariola, L.A.

1975 Chemical termination of cotton fruiting in Arizona in 1974. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 71

Kittock, D.L.; Arle, H.F.; Henneberry, T.J.; and Bariola, L.A.

1978. Chemical termination of late-season cotton fruiting in Arizona and California: 1972-76. *USDA Publ. ARS-W52*

Kittock, D.L.; Mauney, J.R.; Arle, H.F., and Bariola, L.A.

1973. Termination of late season cotton fruiting with growth regulators as an insect control technique. *J. Environ. Quality.* 2:405-408.

Kittock, D.L., and Pinkas, L.L.H.

1971. The effect of number of seeds per boll on some components of yield of Pima cotton. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 30.

Kittock, D.L.; Pinkas, L.L.H., and Fry, K.E.

1979 Branch node location and competition effects on yield components of Pima cotton bolls. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 53-56.

Klein, L.M., and Harmond, J.E.

1966. Effect of cylinder speed and clearance on threshing cylinders in combining crimson clover. *Trans. of the ASAE* 9:499-500, 506

Kleinkopf, G.E.; Huffaker, R.C.; and Matheson, A.

1970. Light-induced de novo synthesis of ribulose-1,5-diphosphate carboxylase in greening leaves of barley. *Plant Physiol.* 46:416-418.

Kleppler, B.T.; Huck, H.M.; and Fiscus, E.L.

1973 Water relations and growth of cotton in drying soil. *Agron. J.* 65 307-310.

Klocke, J.A., and Chan, B.G.

1982 Effects of cotton condensed tannin on feeding and digestion of the cotton pest insect, *Heliothis zea*. *J. Insect Physiol.*

Knecht, G.N.

1975 Response of radish to high CO₂. *HortSci.* 10:271-275

- Knecht, G.N., and O'Leary, J.W.
1974. Increased tomato fruit development by CO₂ enrichment. *J. Amer. Soc. Hort. Sci.* 99:214-216.
- Knecht, G.N., and O'Leary, J.W.
1983. The influence of carbon dioxide on the growth, pigment, protein, carbohydrate, and mineral status of lettuce. *J. Plant Nut.* 6:301-312.
- Koehler, B.
1957. Pericarp injuries in seed corn. 111. *Agr. Exp. Sta. Bull.* 617.
- Kochler, D.E., and Varner, J.E.
1971. Gibberellic acid enhanced phospholipid synthesis in aleurone layers. *Plant Physiol.* 47S:24.
- Koehler, D.E., and Varner, J.E.
1973. Hormonal control of orthophosphate incorporation into phospholipids of barley aleurone layers. *Plant Physiol.* 52:208-214.
- Kohel, R.J.
1978a. Breeding for cottonseed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 223-225.
- Kohel, R.J.
1978b. Survey of *Gossypium hirsutum* L. germplasm collections for seed-oil percentage and seed characteristics. USDA, ARS-S-187. pp. 38.
- Kohel, R.J.
1980. Genetic studies of seed oil in cotton. *Crop Sci.* 20:784-789.
- Kohel, R.J., and Lewis, C.F.
1970. Texas Marker-1: A description of a genetic standard for *Gossypium hirsutum* L. *Crop Sci.* 10:670-673.
- Kohel, R.J.; Lewis, C.F.; and Richmond, T.R.
1965. The genetics of flowering response in cotton. V. Fruiting behavior of *Gossypium hirsutum* L. and *Gossypium barbadense* in interspecific hybrids. *Genetics* 51:601-604.
- Kohel, R.J.; Quisenberry, J.E.; and Benedict, C.R.
1974a. Fiber elongation and dry weight changes in mutant lines of cotton. *Crop Sci.* 14:471-474.
- Kohel, R.J., and Richmond, T.R.
1962. The genetics of flowering response in cotton. IV. Quantitative analysis of photoperiod of Texas 86, *Gossypium hirsutum* L. race *latifolium* in a cross with an inbred line of cultivated American upland cotton. *Genetics* 47:1535-1542.
- Kohel, R.J.; Richmond, T.R.; and Lewis, C.F.
1974b. Genetics of Flowering. VI. Flowering behavior of *Gossypium hirsutum* L. and *Gossypium barbadense* L. Hybrids. *Crop Sci.* 14:696-699.
- Koli, S.E., and Morrill, L.G.
1976. Effects of narrow row, plant population, and nitrogen application on cotton fiber characteristics. *Agron. J.* 68:794-797.
- Köller, W.; Frevert, J.; and Kindl, H.
1979. Albumins, glyoxysomal enzymes, and globulins in dry seeds of *Cucumis sativus*: Qualitative and quantitative analysis. *Hoppe-Seyler's Physiol. Chem.* 360:167-176.
- Körner, C.H.; Scheel, J.A.; and Bauer, H.
1979. Maximum leaf diffusive conductance in vascular plants. *Photosynthetica* 13:45-82.
- Kosmidou-Dimitropoulou, K.
1976. Physiological identification of cotton fiber technological characteristics: Hormonal action in fiber initiation and development. Doctoral Dissertation, State University of Ghent, Belgium.
- Kosmidou-Dimitropoulou, K.
1981. Influence of gibberellins on cotton. *In* Abstracts of Panhellenic Congress of Geotechnical Research, Halkidiki, May 5-8, 1981. pp. 18.
- Koziol, M.J., and Cowling, D.W.
1978. Changes in carbohydrate levels in red kidney beans (*Phaseolus vulgaris* L.) exposed to sulphur dioxide. *J. Exp. Bot.* 29:1037-1043.

- Kozlowski, T.T.
1973 *Shedding of Plant Parts* pp. 560 Acad. Press, New York
- Kramer, P.J.
1940 Root resistance as a cause of decreased water absorption by plants at low temperature *Plant Physiol.* 15:63-79.
- Kramer, P.J.
1959. "Transpiration and Water Economy of Plants" *In Plant Physiology V* F.C. Steward (ed.), New York
- Kramer, P.J.
1969. *Plant and Soil Water Relationships A Modern Synthesis*. McGraw-Hill, New York
- Kramer, P.J.
1981 Carbon dioxide concentration, photosynthesis, and dry matter production. *Bioscience* 31:29-33.
- Krause, G.H., and Heber, U.K.
1976 Energetics of intact chloroplasts. *In* J. Barber (ed.), *The Intact Chloroplast*, pp 171-214. Elsevier Publish. Co., Amsterdam.
- Krenzer, F.G., Jr., and Moss, D.N.
1975. Carbon dioxide enrichment effects upon yield and yield components in wheat. *Crop Sci* 15:71-74
- Kretchman, D.W.
1969. An interim report. CO₂ enrichment of outdoor crops. Ohio Agr. Res. and Dev. Center, Wooster, Ohio. pp 67.
- Kretchman, D.W.
1970 Interim report III. CO₂ enrichment of outdoor crops Ohio Agr. Res. and Dev. Center, Wooster, Ohio. pp. 22.
- Kretchman, D.W., and Howlett, F.S.
1970. CO₂ enrichment for vegetable production. *Trans. Amer. Soc. Agr. Eng.* 13 252-256
- Kriedemann, P.E., Loveys, B.R.; and Downton, W.J.S.
1975. Internal control of stomatal physiology and photosynthesis II Photosynthetic response to phaseic acid *Aust. J. Plant Physiol.* 2:553-567
- Kriedemann, P.E.; Loveys, B.R., Fuller, G.L., and Leopold, A.C.
1972. Abscisic acid and stomatal regulation. *Plant Physiol.* 49 842-847.
- Kriedemann, P.E.; Loveys, B.R.; Possingham, J.V., and Satoh, M.
1976 Sink effects on stomatal physiology and photosynthesis. *In* J.F. Wardlaw and J.B. Passioura (eds). *Transport and Transfer Processes in Plants*, pp 401-414. Acad. Press, New York.
- Krieg, D.R.
1981. Leaf development and function as related to water stress *Proc. Beltwide Cotton Prod. Res. Conf.* 35:41-42.
- Krieg, D.R.
1983a. Photosynthetic activity in stressed plants. *J. Agron. Water Manage.* 7:249-263.
- Krieg, D.R.
1983b. Whole plant response to water stress II. Carbon assimilation and utilization *In* H.M. Taylor, W.R. Jordan, and T.R. Sinclair (eds), *Limitation to Efficient Water Use in Crop Production* pp. 319-330. Amer. Soc. Agron., Madison.
- Krieg, D.R., and Bartee, S.N.
1975. Cotton seed density. Associated germination and emergence properties *Agron. J.* 67 343-347.
- Krieg, D.R.; Connor, J.W.; and Gipson, J.R.
1972. The effect of controlled night temperatures on the accumulation of simple sugars in the developing cotton boll. 26th Cotton Defoliation—Physiology Conference. pp. 29-31.

- Krieg, D.R.; Gipson, J.R.; and Barnes, L.W.
1973 The chemical composition of cotton bolls and seeds developed under controlled night temperatures. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 42-45.
- Krieg, D.R., and Sung, J.M.
1979. *Source-sink relations of cotton as affected by water stress during boll development.* In *Cotton Physiology—A Treatise: Section I Flowering, Fruiting and Cutout.* J. McD Stewart (ed.), *Proc. Beltwide Prod. Res. Conf. Phoenix, Az.,* pp. 302-305.
- Krishnan, T.V., and Iyengar, R.L.N.
1960. Study of the variation of fiber length within and between seeds of the same strain. *The Ind. Cotton Grow. Rev.* XIV:395-406.
- Krizek, D.T.
1969. *Enriched environments for starting seedlings.* *Proc. 24th Amer. Hort. Cong.* pp. 12-16. Philadelphia, Pennsylvania.
- Krizek, D.T.
1970. *Introduction Proceedings: Controlled Atmospheres for Plant Growth.* *Trans. Amer. Soc. Ag Eng* 13:237
- Krizek, D.T.
1972. *Accelerated growth of birch in controlled environments.* *Proc. Intl. Plant Prop. Soc.* 22:390-395.
- Krizek, D.T.
1974. *Maximizing plant growth in controlled environments.* In P. Chouard and N.deBilderling (eds.), *Phytotronics III. Phytotronics in Agricultural and Horticultural Research,* pp. 6-13. Gauthier-Villars, Paris
- Krizek, D.T.
1979a. *Carbon dioxide: Guidelines.* In T.W. Tibbitts and T. T. Kozlowski (eds.), *Controlled Environment Guidelines for Plant Research.* pp. 241-269. Acad. Press, New York.
- Krizek, D.T.
1979b. "Carbon Dioxide Enrichment." *Proc. Cotton Prod. Res. Confs.* pp 283-290.
- Krizek, D.T.
1982. *Plant response to atmospheric stress caused by waterlogging.* In M.N. Christiansen and C.F. Lewis (eds.), *Breeding Plants for Less Favorable Environments,* pp. 241-269. Wiley, New York.
- Krizek, D.T., and Ambler, J
1979. *Influence of relative humidity and type of container on the uptake of Ca, Fe, P, and Zn by cotton plants under greenhouse and growth chamber conditions.* *Proc. 33rd Cotton Physiol. Conf.* pp. 53.
- Krizek, D.T.; Bailey, W.A.; and Klueter, H.H.
1970a. *A "head start" program for bedding plants through controlled environments.* In W.W. Carlson (ed.), *Proceedings 3rd Natl. Bedding Plant Conf.,* pp. 43-53. East Lansing, Michigan.
- Krizek, D.T.; Bailey, W.A.; Klueter, H.H.; and Cathey, H.M.
1968. *Controlled environments for seedling production.* *Proc. Intl. Plant Prop. Soc.* 18:273-280.
- Krizek, D.T.; Bailey, W.A.; Klueter, H.H.; and Liu, R.C.
1974. *Maximizing growth of vegetable seedlings in controlled environments at elevated temperature, light, and CO₂.* *Acta Hort.* 38:89-102.
- Krizek, D.T., and Mandava, N.B.
1983a. *Influence of spectral quality on the growth response of intact bean plants to brassinosteroid: A growth promoting steroidal lactone. I. Stem elongation and morphogenesis.* *Physiol. Plant.* 57:317-323.
- Krizek, D.T., and Mandava, N.B.
1983b. *Influence of spectral quality on the growth response of intact bean plants to brassinosteroid: A growth promoting steroidal lactone. II. Chlorophyll content and partitioning of assimilate.* *Physiol. Plant.* 57:324-329.

- Krizek, D.T.; Zimmerman, R.H.; Klueter, H.H., and Bailey, W.A.
1970b. Growth and development of crabapple seedlings in controlled environments: Effects of light intensity and CO₂ concentration. *Plant Physiol.* 46:5-7.
- Krizek, D.T.; Zimmerman, R.H.; Klueter, H.H.; and Bailey, W.A.
1971. Growth of crabapple seedlings in controlled environments. Effects of CO₂ level and time and duration of CO₂ treatment. *J. Amer. Soc. Hort. Sci.* 96:285-288
- Krzyzanowski, F.C.
1980. Factors affecting the germination and emergence of cotton seed. Ph.D. Dissertation. Mississippi State University, Miss. State, MS pp. 106.
- Ku, S.B., and Edwards, G.E.
1977. Oxygen-inhibition of photosynthesis. I. Temperature dependence and relation to O₂/CO₂ solubility ratio. *Plant Physiol.* 59:986-990
- Kuc, J.
1982. Plant immunization-mechanisms and practical implications. In R.K.S. Wood (ed.), *Active Defense Mechanisms in Plants*, pp. 157-178. Plenum Publ. Corp.
- Kumar, C.R., and Subramanian, D.
1980. Studies on *Fusarium* wilt of cotton. III. Role of gossypol in disease resistance. *Phytopath.* 70:193-204
- Kunze, O.R.
1978. Seed density: Culling by floatation. Summary Proceedings Western Cotton Production Conference, Phoenix, AZ pp. 50-54.
- Kunze, O.R.; Wilkes, L.H.; and Niles, G.A.
1969. Field emergence and growth response related to the physical characteristics of cottonseed. *Trans. Amer. Soc. Agr. Eng.* 12:608-610, 613.
- Kuo-Fen, C., Wei-Yu, W.; Min-Yi, T.; and Peng-Ti, C.
1980. Endometrial changes after administration of gossypol for menorrhagia. *Amer. J. of Obstet and Gyn.* 138:1227-1229.

L

- Laemmli, U.K.
1970. Cleavage of structural proteins during the assembly of the head of bacteriophage T₄. *Nature* 227:680-685.
- Lai, C.S.
1972. Comparison of fractionating aspirator and gravity separator in the processing of acid-delinted cottonseed. M.S. Thesis, Mississippi State University, Miss. State, MS pp. 67.
- Lanche, A.J.
1978. Effects of refrigeration, CO₂, and photoperiod on the initial and subsequent growth of rooted cuttings of *Hex cornuta* Lindl. et Paxt. cv. *Burfordii*. *Plant Prop.* 24:8-10.
- Lang, W.A.; Ogren, W.A., and Hageman, R.H.
1974. Regulation of soybean net photosynthetic CO₂ fixation by the interaction of CO₂, O₂, and ribulose 1,5-diphosphate carboxylase. *Plant Physiol.* 54:678-685.
- Lambert, J.R., and Baker, D.N.
1984. "RHIZOS: A Simulator of Row Crop Rhizospheres." *South Carolina Agr. Exp. Sta. Bull.* 1080.
- Lancaster, J.D., Andrews, W.B., and Jones, U.S.
1953. Influence of sodium on yield and quality of cotton lint and seed. *Soil Sci.* 76:29-40.
- Lane, H.C.
1958. Response of cotton on the Texas high plains to foliar treatments of gibberellic acid. *Proc. 13th Cotton Defoliation-Physiol. Conf.*, pp. 26.
- Lane, H.C.; Hall, W.C.; and Johnson, S.P.
1954. Effects of temperature on foliar abscission of cotton. *Proc. Beltwide Cotton Def. Conf.* 8:48.

- Lane, H.C., and Schuster, M.F.
1981. Condensed tannins of cotton leaves. *Phytochemistry* 20:425-427.
- Lang, A.G.
1938. The origin of lint and fuzz fibers of cotton. *J. Agric. Res.* 56:507-521.
- Lang, A.R.G.
1973. Leaf orientation of a cotton plant. *Agric. Met.* 37:37-51.
- Lang, J.M.; Eisinger, W.R.; and Green, P.B.
1982. Effects of ethylene on the orientation of microtubules and cellulose microfibrils of Pea epicotyl cells with polylamellate cell walls. *Protoplasma* 110:5-14
- Lange, O.L.; Losch, R.; Schulze, E.D.; and Kappen, L.
1971. "Responses of stomata to changes in humidity." *Planta* 100:76-86.
- Lasky, R.A., and Mills, A.D.
1975. Quantitative film detection of ^3H and ^{14}C in polyacrylamide gels by fluorography. *Eur. J. Biochem.* 56:335-341.
- Latzko, E., and Kelly, S.J.
1979. Enzymes of the reductive pentose phosphate cycle, pp 239-250. *In* Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes, M. Gibbs and E. Latzko (eds.), *Encyclopedia of Plant Physiology*. Vol. 6. Springer-Verlag, N.Y.
- Lauchli, A.; Kent, L.M.; and Turner, J.C.
1981. Physiological responses of cotton genotypes to salinity. *Proc. Beltwide Cotton Prod. Res. Conf. National Cotton Council, Memphis*. pp. 40.
- Law, T.C.
1919. Why does protein and oil vary in cottonseed? *Cotton Oil Press* 3:37-38.
- Lawhon, J.T.; Carter, C.M.; and Mattil, K.F.
1976. Evaluation of the food use potential of sixteen varieties of cottonseed. *J. Amer. Oil Chem. Soc.* 54:75-80.
- Lawlor, D.W.
1976. Water stress induced changes in photosynthesis, photorespiration, and CO_2 compensation concentration of wheat. *Photosynthetica* 10:378-387.
- Lawlor, D.W.
1979. Effects of water and heat stress on carbon metabolism of plants with C_3 and C_4 photosynthesis. *In* H. Mussell and R.C. Staples (eds.) *Stress Physiology in Crop Plants*. John Wiley & Sons Inc., pp. 303-326.
- Lawson, J.P., McCoy, P.A.; McSay, A.E.; and Moore, F.D. III.
1978. Mulch-covered straw provides CO_2 enrichment. *Experiment Station Progress Report 22*, Colorado State University. Fort Collins, Colorado, pp. 2.
- Leding, A.R., and Lytton, L.R.
1933. Effects of plant spacing and irrigation on number of locks in cotton bolls *J. Agric. Res.* 47:33-52.
- Lee, J.A.
1962. Genetical studies concerning the distribution of pigment glands in the cotyledons and leaves of upland cotton. *Genetics* 47:131-142.
- Lee, J.A.
1964. Some problems in breeding for increased gossypol level in upland cotton. *Agron. Abstr.* 56th Ann. Mtg. Am. Soc. Agron. pp. 72
- Lee, J.A.
1975. Inheritance of hard seed in cotton. *Crop Sci.* 15:149-152.
- Lee, J.A.
1977. Inheritance of gossypol level in *Gossypium*. III. Genetic potentials of two strains of *Gossypium hirsutum* L. differing widely in seed gossypol level. *Crop Sci.* 17:827-830.
- Lee, J.A.
1978. Allele determining rugate fruit surface in cotton. *Crop Sci.* 18:251-254.

- Leffler, H.R.
1976a. Altered development of ribonuclease activity and formation of polyribosomes in chilled cotton cotyledons. *Crop Sci.* 16:71-75.
- Leffler, H.R.
1976b. Carbohydrate composition of developing cottonseed. *Agron. Abstr.* 68:73.
- Leffler, H.R.
1976c. Development of cotton fruit. I. Accumulation and distribution of dry matter. *Agron. J.* 68:855-857.
- Leffler, H.R.
1980a. Cultivar and physiology influence planting quality of cotton seed. *Agron. Abstr.* 72:110.
- Leffler, H.R.
1980b. Early termination of maturation reduces the biological quality of cottonseed. *Plant Physiol.* 65:141.
- Leffler, H.R.; Elmore, C.D.; and Hesketh, J.D.
1977. Seasonal and fertility-related changes in cottonseed protein quantity and quality. *Crop Sci.* 17:953-956.
- Leffler, H.R., and King, E.E.
1977. Histochemistry of cottonseed development. *Agron. Abstr.* 69:88.
- Leffler, H.R.; Meredith, W.R., Jr.; and Chandler, J.M.
1978. Canopy physiology and seasonal patterns affect the composition and yield capacity of cottonseed. *Agron. Abstr.* 70:79-80.
- Leffler, H.R., and Tubertini, B.S.
1976. Development of cotton fruit. II. Accumulation and distribution of mineral nutrients. *Agron. J.* 68:858-861.
- Leffler, H.R., and Williams, R.D.
1983. Seed density classification influences germination and seedling growth of cotton. *Crop Sci.* 23:161-165.
- Leigh, T.F.; Grimes, D.W.; Dickens, W.L.; and Jackson, C.E.
1974. Planting pattern, plant population, irrigation, and insect interaction in cotton. *Environ. Entomol.* 3:492-496.
- Leinweber, C.L., and Hall, W.C.
1959b. Foliar abscission in cotton. II. Influence of age and defoliants on chemical composition of blades and pulvinoids. *Bot. Gaz.* 120:144-151.
- Lemon, E.R.
1977. The land's response to more carbon dioxide. *In* N.R. Anderson and A. Malahoff (eds.), *The Fate of Fossil Fuel CO₂ in the Oceans*, pp 97-129. Plenum Press, New York.
- Lemon, E., Stewart, D.W.; and Sahwcraft, R.W.
1971. The sun's work in a cornfield. *Science* 174:374-378.
- Leonard, O.A., and Pinckard, J.A.
1946. Effects of various oxygen and carbon dioxide concentrations on cotton root development. *Plant Physiol.* 21:18-36.
- Leonhardt, J.L.; Zoerb, G.C.; and Harmann, D.D.
1961. Investigation of factors affecting impact damage to sorghum seed. *Amer. Soc. Agr. Eng. St. Joseph, MI.* 1961 Ann. Meeting. Paper No. 61-125.
- Leopold, A.C.
1971. Physiological processes involved in abscission. *Hort. Sci.* 6:376-378.
- Leopold, A.C., and Kriedemann, P.E.
1975. *Plant growth and development* 2nd ed. McGraw-Hill, New York.
- Lacey, J.; Stolzy, L.H.; Blank, G.B.; and Lunt, O.R.
1961. Effect of temperature on oxygen-diffusion rates and subsequent shoot growth and mineral content of two plant species. *Soil Sci.* 92:314-321.
- Latham, D.S.
1967. Chemistry and physiology of kinetin-like compounds. *Ann. Rev. Plant Physiol.* 18:349-364.

- Levengood, W.C.; Bondie, J.; and Chen, Chi-Ling
1975. Seed selection for potential viability. *J. Exp. Bot.* 26:911-919.
- Levitt, J.
1972. Responses of Plants to Environmental Stresses. Acad. Press, New York.
- Levy, W.B., and McCarthy, B.J.
1975. Messenger RNA complexity in *Drosophila melanogaster*. *Biochemistry* 14:2440-2446.
- Lewin, B.M.
1980. Gene Expression 2 (2nd Edition) John Wiley and Sons, N.Y. pp. 1160.
- Lewis, C.F., and Richmond, T.R.
1957. The genetics of flowering response in cotton. I. Fruiting behavior of *Gossypium hirsutum* L. var. *mariegalante* in a cross with a variety of American upland cotton. *Genetics* 42:499-500.
- Lewis, C.F., and Richmond, T.R.
1968. Cotton as a crop. In F.C. Elliot, M. Hoover, and W.K. Porter, Jr. (eds.), *Advances in Production and Utilization of Quality Cotton. Principles and Practices.* pp. 1-21 Iowa State University Press, Ames.
- Lewis, H.L.
1969a. Effects of cottonseed free fatty acids on developing cotton seedlings. *Proc. Beltwide Cotton Prod. Res. Conf.* 1969:64-70.
- Lewis, H.L.
1969b. The relationships of delinting methods to cottonseed exudates. *Proc. Beltwide Cotton Prod. Res. Conf.* 1969:130-132.
- Lewis, L.N., and Varner, J.E.
1970. Synthesis of cellulase during abscission of *Phaseolus vulgaris* leaf explants. *Plant Physiol.* 46:194-199
- Lieberman, M.; Kunishi, A.; Mapson, L.W.; and Wardale, D.A.
1966. Stimulation of ethylene production in apple tissue slices by methionine. *Plant Physiol.* 41:376-382
- Lieberman, M., and Mapson, L.W.
1964. Genesis and biogenesis of ethylene. *Nature* 204:343-345.
- Lin, W.C., and Molnar, J.M.
1982. Supplementary lighting and CO₂ enrichment for accelerated growth of selected woody ornamental seedlings and rooted cuttings. *Can. J. Plant Sci.* 62:703-707.
- Lipe, J.A., and Morgan, P.W.
1972a. Ethylene: Role in fruit abscission and dehiscence processes. *Plant Physiol.* 50:759-764.
- Lipe, J.A., and Morgan, P.W.
1972b. Ethylene: Response of fruit dehiscence to CO₂ and reduced pressure. *Plant Physiol.* 50:765-768.
- Lipe, J.A., and Morgan, P.W.
1973a. Location of ethylene production in cotton flowers and fruits. *Planta* 115:93-96.
- Lipe, J.A., and Morgan, P.W.
1973b. Ethylene, a regulator of young fruit abscission. *Plant Physiol.* 51:949-953.
- Little, C.H.A., and Eidt, D.C.
1968. Effect of abscisic acid on bud break and transpiration in woody species. *Nature (London)* 220:489-499.
- Liu, T.Y., and Chang, Y.H.
1971. Hydrolysis of proteins with p-toluenesulfonic acid. *J. Biol. Chem.* 246:2842-2848.
- Lloyd, F.E.
1920. Environmental changes and their effect upon boll—boll-shedding in cotton (*Gossypium herbaceum*). *Ann. N.Y. Acad. Sci.* 29:1-131
- Lockwood, J.G.
1982. Increasing atmospheric carbon dioxide and its consequences. *Nature* 299:203.

- Loewenschuss, H., and Wakelyn, P.J.
1972. Occurrence of gossypol in dried bract of the cotton plant. *J. Amer. Oil Chem. Soc.* 49:678-680
- Lofland, H.B.
1950. *In vitro* culture of the cotton embryo. *Bot. Gaz.* 111:307-311
- Longenecker, D.E., and Erie, L.J.
1968. Irrigation water management. *In Advances in production and utilization of quality cotton: Principles and practices.* F.C. Elliott, M. Hoover and W.K. Porter (eds.). Iowa State University Press, Ames, Iowa, pp. 321-345
- Longo, G.P., and Longo, C.P.
1975. Development and mitochondrial enzyme activities in germinating maize scutellum. *Plant Sci Lett.* 5:339-346.
- Longstreth, D.J., and Nobel, P.S.
1979. Salinity effects on leaf anatomy. *Plant Phys.* 63:700-703
- Loomis, H.F.
1927. Development of flowers and bolls of Pima and Acala cotton in relation to branching. USDA Bul. No. 1365
- Loomis, R.S., and William, W.A.
1963. Maximum crop productivity. An estimate. *Crop Sci.* 3:67-72
- Lord, E.
1961. The characteristics of raw cotton. The textile institute and Butterworth, London. (Vol. 2, part 1).
- Lorimar, G.H.; Badger, M.R., and Andrews, T.J.
1977. D-Ribulose-1, 5-bisphosphate carboxylase-oxygenase: Improved methods for the activation and assay of catalytic activities. *Analytical Biochem.* 78:66-75.
- Louwerse, W.
1980. Effects of CO₂ concentration and irradiance on the stomatal behavior of maize, barley and sunflower plants in the field. *Plant Cell and Environ.* 3:391-398.
- Loveys, B.R.
1977. The intracellular location of abscisic acid in stressed and nonstressed leaf tissue. *Physiol Plant.* 40:6-10.
- Loveys, B.R., and Kriedmann, P.E.
1974. Internal control of stomatal physiology and photosynthesis. I. Stomatal regulation and associated changes in endogenous levels of abscisic acid and phaseic acids. *Aust. J. Plant Physiol.* 1:407-415
- Low, A.; Hesketh, J.; and Muramoto, H.
1969. Some environmental effects on the varietal node number of the first fruiting branch. *Cotton Grow. Rev.* 46:181-188
- Lowry, O.H., Rosebrough, N.; Farr, A.L.; and Randall, R.J.
1951. Protein measurement with the Folin phenol reagent. *J. Biol. Chem.* 193:265-275.
- Ludlow, M.M., and Ng, T.T.
1976. Effect of water deficit on carbon dioxide exchange and leaf elongation rate of *Panicum maximum* var. *trichoglume*. *Aust. J. Plant Physiol.* 3:401-413.
- Ludwig, C.A.
1932. The germination of cottonseed at low temperatures. *J. Agr. Res.* 44:367-380.
- Lukefahr, M.J., and Fryxell, P.A.
1967. Content of gossypol in plants belonging to genera related to cotton. *Econ. Bot.* 21:128-131.
- Lukefahr, M.J., and Martin, D.F.
1963. Evaluation of damage to lint and seed of cotton caused by pink bollworm. *J. Econ. Entomol.* 56:710-713.
- Lukefahr, M.J., and Martin, D.F.
1966. Cotton-plant pigments as a source of resistance to the bollworm and tobacco budworm. *J. Econ. Entomol.* 59:176-179.

- Lurie, S., and Hendrix, D.L.
1979. Differential ion stimulation of plasmalemma adenosine triphosphatase from leaf epidermis and mesophyll of *nicotiana rustica* L. *Plant Physiol.* 63:936-939.
- Lürssen, K.; Naumann, K.; and Schröder, R.
1979. 1-Aminocyclopropane-1-carboxylic acid—an intermediate of the ethylene biosynthesis in higher plants. *Z. Pflanzenphysiol.* 92:285-294.
- Lyman, C.M.; Chang, W.Y.; and Couch, J.R.
1953. Evaluation of protein quality in cottonseed meals by chick growth and by a chemical index method. *J. Nutr.* 49:679-690.
- Lynn, D.G., and Jeffs, P.W.
1975. Isolation and structure of 1-hydroxy-7-methoxy-4-isopropyl-1,6-dimethyl-2(1H)-naphthalenone from cotton. *J. Org. Chem.* 40:2958-2960.
- Lyons, J.M., and Raison, J.K.
1970. Oxidative activity of mitochondria isolated from plant tissue sensitive and resistant to chilling injury. *Plant Physiol.* 45:386-389.
- Lyutova, M.I.
1962. The effect of heat hardening on photosynthesis and respiration of higher plants. *Botanicheski Zhurnal* 47:1761-1774.

M

- Maas, E.V., and Hoffman, C.J.
1977. Crop salt tolerance—current assessment. *J. of Irrig. and Drain. Div. ASCE* Ir2:115-134.
- Mabry, T.J., Markham, K.R.; and Thomas, M.B.
1970. *The Systematic Identification of Flavonoids.* Springer-Verlag. New York.
- MacDonald, D., Fielding, W.L.; and Ruston, D.F.
1947. Sulfuric acid treatment of cotton seed and its effect on germination, development, and yield. *J. Agr. Sci.* 37:291-296.
- MacDowell, F.D.H.
1972. Growth kinetics of Marquis wheat. II. Carbon dioxide dependence. *Can. J. Bot.* 50:883-889.
- Mace, M.E.
1978. Contributions of tyloses and terpenoid aldehyde phytoalexins to *Verticillium* wilt resistance in cotton. *Physiol. Plant Pathol.* 12:1-11.
- Mace, M.E., and Bell, A.A.
1981. Flavanol and terpenoid aldehyde synthesis in tumors associated with genetic incompatibility in a *Gossypium hirsutum* X *G. gossypoides* hybrid. *Can. J. Bot.* 59:951-955.
- Mace, M.E., and Howell, C.R.
1974. Histochemistry and identification of condensed tannin precursors in roots of cotton seedlings. *Can. J. Bot.* 52:2423-2426.
- Mace, M.E.; Bell, A.A.; and Beckman, C.H.
1976. Histochemistry and identification of disease-induced terpenoid aldehydes in *Verticillium*-wilt-resistant and -susceptible cottons. *Can. J. Bot.* 54:2095-2099.
- Mace, M.E.; Bell, A.A.; and Stipanovic, R.D.
1974. Histochemistry and isolation of gossypol and related terpenoids in roots of cotton seedlings. *Phytopath.* 64:1297-1302.
- Mace, M.E.; Bell, A.A.; and Stipanovic, R.D.
1978. Histochemistry and identification of flavanols in *Verticillium* wilt-resistant and -susceptible cottons. *Physiol. Plant Pathol.* 13:143-149.
- MacKenzie, A.J., and van Schaik, P.H.
1963. Effect of nitrogen on yield, boll, and fiber properties of four varieties of irrigated cotton. *Agron. J.* 55:345-347.

- Maclachlan, G.A.
1977. Cellulose metabolism and cell growth. *In* "Plant Growth Regulation" Pilet (ed.), pp 13-20 Springer-Verlag.
- Madsen, E.
1968. Effect of CO₂ concentration on the accumulation of starch and sugar in tomato leaves. *Physiol. Plant.* 21:168-175
- Madsen, E.
1971a. Cytological changes due to the effect of carbon dioxide concentration on the accumulation of starch in chloroplasts of tomato leaves. Royal Veterinary and Agricultural University Yearbook, Copenhagen, pp. 191-194.
- Madsen, E.
1971b. The effect of carbon dioxide concentration on the photosynthetic rate in tomato leaves. Royal Veterinary and Agricultural University Yearbook, Copenhagen, pp. 195-200.
- Madsen, E.
1973. The effect of CO₂ concentration on development and dry matter production in young plants *Acta Agric. Scand.* 23:234-240.
- Madsen, E.
1974. Effect of CO₂ concentration on growth and fruit production of tomato plants. *Acta Agric. Scand.* 23:242-246.
- Madsen, E.
1976. Effect of CO₂ concentration on morphological, histological, cytological and physiological processes in tomato plants. Dissertation pp 246 State Seed Testing Station, Lyngby, Denmark.
- Maga, J.A., and Lorenz, K.
1974. Gas-liquid chromatography separation of the free phenolic acid fractions in various oilseed protein sources. *J. Sci. Food Agric.* 25:797-802
- Magstad, O.C.; Ayers, A.D.; Wadleigh, C.H.; and Gauch, H.G.
1943. Effect of salt concentration, kind of salt, and climate on plant growth in sand cultures. *Plant Physiol.* 18:151-166.
- Magnuson, C.E.; Fares, Y.; Goeschl, J.D.; Nelson, C.E.; Strain, B.R.; Jaeger, C.H.; and Bilpuch, E.G.
1982. An integrated tracer kinetics system for studying carbon uptake and allocation in plants using continuously produced ¹⁴C₂ Rad and Environ Biophysics. 21:51-65.
- Mahdi, M.T.; Lotfi, A.A.; Shiltawy, E.; and Farag, F.F.
1971. Cold test for cotton seed. *Proc. Int. Seed Test. Assoc.* 36:279-287.
- Mahon, J., and Low, A.
1972. Growing degree days as a measure of temperature effects on cotton. *Cotton Grow. Rev.* 49:39-49.
- Majernik, O., and Mansfield, T.A.
1970. Direct effect of SO₂ pollution on the degree of opening of stomata. *Nature, Lond.* 227:377-378.
- Majernik, O., and Mansfield, T.A.
1972. Stomatal response to raised atmospheric CO₂ concentrations during exposure of plants to SO₂ pollution. *Environ. Pollut.* 3:1-7.
- Maleki, P.
1966. Microenvironmental influence on cottonseed deterioration in the field. M.S. Thesis Mississippi State University, Mississippi State, MS.
- Malik, M.N.A.; Edwards, D.G.; and Evenson, J.P.
1981. Effects of flower bud removal on nitrogen supply and growth and development of cotton. *Aust. J. Plant Physiol.* 8:285-291
- Malkin, R.
1982. Photosystem I. *Ann. Rev. Plant Physiol.* 33:455-479.

- Malloch, K.R., and Fenton, R.
1979. Inhibition of stomatal opening by analogues of abscisic acid. *J. Exp. Bot.* 30:1201-1209.
- Maltby, D.; Carpita, N.C.; Montezinos, D.; Kulow, C.; and Delmer, D.P.
1979 β -1,3-Glucan in developing cotton fibers. *Plant Physiol.* 63:1158-1164.
- Mansfield, T.A.
1973. The role of stomata in determining the responses of plants to air pollutants. *Current Adv. Plant Sci.* 2:11-20.
- Mansfield, T.A.
1976. Delay in the response of stomata to abscisic acid in CO₂-free air. *J. Exp. Bot.* 27:559-564.
- Mansfield, T.A., and Majernik, O.
1970. Can stomata play a part in protecting plants against air pollutants? *Environ. Pollut.* 1:149-154.
- Mansfield, T.A., and Meidner, H.
1966. Stomatal opening in light of different wavelengths: Effects of blue light independent of carbon dioxide concentration. *J. Exp. Bot.* 17:510-521.
- Mansfield, T.A.; Travis, A.J., and Jarvis, R.G.
1981. Responses to light and CO₂. *In* P.G. Jarvis and T.A. Mansfield (eds.), *Stomatal Physiology*, Society for Experimental Biology Seminar Series, Vol. 8, pp. 119-135. Cambridge University Press, Cambridge.
- Mansfield, T.A., Wellburn, A.R.; and Moreira, T.J.S.
1978. The role of abscisic acid and farnesol in the alteration of water stress. *Philos. Trans. Roy. Soc. London B.* 284:471-482.
- Marani, A., and Amirav, A.
1970. Effect of delinting and of genetical factors on the germination of cotton seeds at low temperatures. *Crop Sci.* 10:509-511.
- Marani, A., and Amirav, A.
1971. Effects of soil moisture stress on two varieties of upland cotton in Israel. I. The coastal plain region. *Experimental Agriculture* 7:213-224.
- Marani, A., and Baker, D.N.
1981. "Development of a Predictive Dynamic Simulation Model of Growth and Yield in Acala Cotton." Science Report to U.S.—Israel Binational Foundation. pp. 177., April 30, 1981.
- Marani, A.; Baker, D.N.; Reddy, V.R.; and McKinion, J.M.
1981. "The Effect of Water Stress on Canopy Senescence and Apparent Photosynthesis in Cotton."
- Marani, A., and Dag, J.
1962a. Germination of seeds of cotton varieties at low temperatures. *Crop Sci.* 2:267.
- Marani, A., and Dag, J.
1962b. Inheritance of the ability of cotton seeds to germinate at low temperature in the first hybrid germination. *Crop Sci.* 2:243-245.
- Marani, A., and Levi, D.
1973. Effect of soil moisture during early stages of development on growth and yield of cotton plants. *Agron. J.* 65:637-641.
- Marani, A.; Zur, M.; Eshel, A.; Zimmerman, H.; Carmeli, R.; and Karadvaid, B.
1973. Effect of time and rate of application of two growth retardants on growth, flowering, and yield of upland cotton. *Crop Sci.* 13:429-435.
- Marin, B., and Vieira da Silva, J.B.
1972. Effect of water stress on distribution of RNA in cells of cotton leaves. *Physiol. Plant* 27:150-155.
- Markhart, A.H.; Fiscus, E.L.; Naylor, A.W.; and Kramer, P.J.
1979a. Effect of temperature on water and ion transport in soybean and broccoli systems. *Plant Physiol.* 64:83-87.
- Markhart, A.H.; Fiscus, E.L.; Naylor, A.W.; and Kramer, P.J.
1979b. Effect of abscisic acid on root hydraulic conductivity. *Plant Physiol.* 64:611-614.

- Marsh, P.B., Merola, G.V., Bollenbacher, K., Butler, M.L., and Simpson, M.
1954. The effect of weathering prior to harvest on certain properties of cotton fiber. *Plant Dis. Repr.* 38:106-119.
- Marshall, J.G., and Strugis, M.B.
1953. Effects of sodium fertilizers on yield of cotton. *Soil Sci.* 76:75-79
- Martin, C., and Thimann, K.V.
1972. Role of protein synthesis in the senescence of leaves. II. The influence of amino acids on senescence. *Plant Physiol.* 50:432-437.
- Martin, R.D.; Ballard, W.W., and Simpson, D.M.
1923. Growth of fruiting parts in cotton plants. *J. Agr. Res.* 25:195-208.
- Martinez, W.H.; Berardi, I. C., and Goldblatt, L.A.
1970. Cottonseed protein products—composition and functionality. *Agric. and Food Chem.* 18:961-968.
- Marx-Figini, M.
1966a. Comparison of the Biosynthesis of Cellulose *in vitro* and *in vivo* in cotton bolls. *Nature* 210:754-755
- Marx-Figini, M.
1966b. Kinetics of the Biosynthesis of Cellulose in cotton bolls by different light intensities. *Nature* 210:755.
- Marynick, M.C.
1976. Studies on abscission in cotton explants. Ph.D. Dissertation, University of California, Davis.
- Marynick, M.C.
1977. Patterns of ethylene and carbon dioxide evolution during cotton explant abscission. *Plant Physiol.* 59:484-489.
- Maskell, E.J., and Mason, T.G.
1930. Studies of the transport of nitrogenous substances in the cotton plant. V. Movement to the boll. *Ann. Bot.* 44:657-688
- Mason, T.G.
1922. Growth and abscission in Sea Island cotton. *Ann. Bot.* 36:457-483
- Mason, T.G., and Maskell, E.J.
1928a. Studies on the transport of carbohydrates in the cotton plant. I. A study of diurnal variation in the carbohydrates of the leaf, bark, and wood, and the effects of ringing. *Ann. Bot.* 42:189-253.
- Mason, T.G., and Maskell, E.J.
1928b. Studies on the transport of carbohydrates in the cotton plants. II. The factors determining the rate and direction of movement of sugars. *Ann. Bot.* 42:571-636
- Masterson, C.L., and Sherwood, M.T.
1978. Some effects of increased atmospheric carbon dioxide on white clover (*Trifolium repens*) and pea (*Pisum sativum*). *Plant and Soil* 49:421-426.
- Mathers, A.C.
1967. Effect of radial restriction on lateral growth of the root-shoot axis of young cotton plants. *Agron. J.* 59:379-381.
- Matthews, M.A.
1978. Effects of shedding in cotton on carbohydrate partitioning in adjacent fruiting positions—M.S. Thesis. University of Arizona, Tucson.
- Matthews, S., and Bradnock, W.T.
1968. Relationship between seed exudation and field emergence in peas and French beans. *Hort. Res.* 8:89-93.
- Matthews, S., and Whitbread, R.
1968. Factors influencing pre-emergence mortality in peas. I. An association between seed exudates and the incidence of pre-emergence mortality in wrinkled-seeded peas. *Plant Path.* 17:11-17

- Mauney, J.R.
1961. The culture *in vitro* of immature cotton embryos. *Bot. Gaz.* 122:205-209.
- Mauney, J.R.
1963. Initiation of flowering in upland cotton. *Proc. Cotton Physiology Defoliation Conference*. Dallas, Texas. Jan. 1963. pp. 33-34.
- Mauney, J.R.
1966. Floral initiation of upland cotton *Gossypium hirsutum* L. in response to temperatures. *J. Exp. Bot.* 17:452-459.
- Mauney, J.R.
1968. Morphology of the cotton plant. *In Cotton: Principles and Practices*. Edited by F.C. Elliot, M. Hoover, and W.K. Porter, Jr. Iowa State Univ. Press, Ames.
- Mauney, J.R.
1978. The cotton plant: Is it as efficient as it could be? *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 52.
- Mauney, J.R.
1984a. Anatomy and Morphology of Cultivated Cotton. *In Cotton* R.J. Kohel and C.H. Lewis, (eds.), Amer. Soc. Agron. Madison.
- Mauney, J.R.
1984b. Cotton square shedding: Why they fall; what it means to yields. *Crops and Soils* 37(1):20-22.
- Mauney, J.R., and Ball, E.
1959. The axillary buds of *Gossypium*. *Bull. Torey Bot. Club.* 86:236-244.
- Mauney, J.R., Chappell, J.; and Ward, B.J.
1967. Effect of malic acid salts on growth of young cotton embryos *in vitro*. *Bot. Gaz.* 128:198-200
- Mauney, J.R.; Fry, K.E.; and Guinn, G.
1978. Relationship of photosynthetic rate to growth and fruiting of cotton, soybean, sorghum, and sunflower. *Crop Sci.* 18:259-263.
- Mauney, J.R.; Guinn, G.; and Fry, K.E.
1977. Relationship of photosynthetic rate to growth and fruiting of cotton plants. *Proc. 31st Cotton Physiol. Conf.* pp. 74.
- Mauney, J.R.; Guinn, G.; and Fry, K.E.
1980. Analysis of increases of flowers in moisture stressed cotton. *Proc. Beltwide Cotton Prod. Res. Conf.*, pp. 38.
- Mauney, J.R.; Guinn, G.; Fry, K.E.; and Hesketh, J.D.
1979. Correlation of photosynthetic carbon dioxide uptake and carbohydrate accumulation in cotton, soybean, sunflower, and sorghum. *Photosynthetica* 13:260-266
- Mauney, J.R., Guinn, G.; Hesketh, J.D.; Fry, K.E.; and Radin, J.W.
1976. Inhibition of photosynthesis by leaf starch. *In Proc. Beltwide Cotton Prod. Res. Conf.* Las Vegas, Nev. pp. 60.
- Mauney, J.R., and Henneberry, T.J.
1984. Causes of square abscission in cotton in Arizona. *Crop Sci.* 24:1027-1030.
- Mauney, J.R.; Kittock, D.L.; and Bariola, L.A.
1972. Limitation of late season bolls in cotton. A possible new control for pink bollworm. *Proc. 1972 Beltwide Cotton Prod. Res. Conf.* pp. 103-105.
- Mauney, J.R., and Phillips, L.L.
1963. Influence of daylength and night temperature on flowering of *Gossypium*. *Bot. Gaz.* 124:278-283.
- Mauney, J.R., and Szarek, S.R.
1981. Drought tolerant plants: Dry matter production of crop and native species. *In C.C. Black and A.M. Tsui (eds.), Handbook of Biosolar Resources, Vol. I. Fundamental Principles*, pp. 379-386 CRC Press, Boca Raton, FL.

- Mayak, S., Vaadia, Y.; and Dilley, D.R.
1977 Regulation of senescence in carnation (*Dianthus caryophyllus*) by ethylene. Mode of action. *Plant Physiol* 59:591-593.
- Mayne, R.Y.
1956. Lipolytic microorganisms associated with prime and deteriorated cottonseed. *Appl. Microbiol.* 4:263-269.
- Mayne, R.Y., Harper, G.A.; Franz, A.O., Jr.; Lee, L.A.; and Goldblatt, L.A.
1969. Retardation of the elaboration of aflatoxin in cottonseed by impermeability of the seedcoats. *Crop Sci* 9:147-150.
- McAfee, J.A., and Morgan, P.W.
1971 Rates of production and internal levels of ethylene in the vegetative cotton plant. *Plant Cell Physiol.* 12:839-847.
- McArthur, J.A.; Hesketh, J.D., and Baker, D.N.
1975. Cotton. Chapter 10. *In* L.T. Evans (ed.), *Crop Physiology: Some Case Histories*, pp. 297-325. Cambridge University Press, London.
- McClelland, C.K., and Neely, J.W.
1931. The order, rate and regularity of blooming in the cotton plant. *J. Agric. Res.* 42:751-764.
- McClelland, J.H.
1962. The relationship between the thickness of deciduous leaves and their maximum photosynthetic rate. *Amer. J. Bot.* 49:320-322.
- McCormick, J.P.; Pachlatko, J.P.; and Schafer, T.R.
1978. Total synthesis of lacinilene C methyl ether, a probable byssinotic agent. *Tetrahedron Lett.* 3993-3994.
- McCoy, P.A.
1978. Carbon dioxide in the tomato plant microenvironment. M.S. Thesis, Colorado State University, Fort Collins, Colorado, pp. 44.
- McDaniel, R.G.
1977. New test prejudices cotton seed performance. *Crops and Soils*. April/May, 1977. pp. 24.
- McDaniel, R.G.
1979. Physiological and scanning electron microscopic evaluations of cotton seed quality. *Proc Beltwide Cotton Prod. Res. Conf.* 1979:40-42.
- McDaniel, R.G.
1982. The physiology of temperature effects on plants. *In* M.N. Christiansen and C.F. Lewis (eds.), *Breeding Plants for Less Favorable Environments*. pp. 13-45. Wiley, New York.
- McDaniel, R.G., and Taylor, B.B.
1979. Treatments to enhance cottonseed germination and emergence under field stress. 1979 *Agron. Abstr.* pp. 115.
- McDonald, L.D., and Stitt, L.S.
1972. Effect of temperature and humidity on pollen dehiscence in cytoplasmic male-sterile stocks of *Gossypium*. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 60.
- McDonald, M.B., Jr.
1975. A review and evaluation of seed vigor tests. *Proc. Assoc. Off. Seed Anal.* 65:109-139.
- McDonald, M.B., Jr.
1980a. Assessment of seed quality. *Hort. Sci.* 15:784-788.
- McDonald, M.B., Jr.
1980b. Vigor test subcommittee report. *Assoc. Off. Seed Anal. Newslett.* 54:37-40.
- McDonald, M.B., Jr., and Wilson, D.O.
1979. An assessment of the standardization and ability of the ASA-610 to rapidly predict soybean germination. *J. Seed Technol.* 4:1-11.
- McDonald, M.B., Jr. and Wilson, D.O.
1980. ASA-610 ability to detect changes in soybean seed quality. *J. Seed Technol.* 5:56-66.

- McIlrath, W.J.
1956. Lipase activity in cotton seedlings. III. Acad. Sci. Transact. 48:42-48.
- McKibben, G.H.; Mitchell, E.B.; Scott, W.P.; and Hedin, P.A.
1977. Bull weevils are attracted to volatile oils from cotton plants. Environ. Entomol. 6:804-806.
- McKinion, J.M.; Hesketh, J.D.; and Baker, D.N.
1974. Analysis of the exponential growth equation. Crop Sci. 14:549-551.
- McMeans, J.L.; Brown, C.M.; McDonald, R.L.; and Parker, L.L.
1977. Aflatoxins in cottonseed: A comparison of two cultivars. Crop Sci. 17:707-709.
- McMichael, B.L.
1979. The influence of water stress on flowering and fruiting in cotton. In Cotton Physiology—A Treatise. Proc. Beltwide Cotton Prod. Res. Conf. pp. 301-302
- McMichael, B.L.
1980. Water stress adaptation. In Predicting Photosynthesis for Ecosystem Models. J.D. Hesketh and J.D. Jones (eds.), CRC Press pp. 183-204.
- McMichael, B.L.; Burke, J.J.; Berlin, J.; and Quisenberry, J.E.
1983. Variability in root morphology in exotic cotton. Proc. Beltwide Cotton Prod. Res. Conf. 37:59.
- McMichael, B.L., and Elmore, C.D.
1976. The effects of plant water status on cotton boll growth and water relations. Proc. Beltwide Cotton Prod. Res. Conf. pp. 80.
- McMichael, B.L., and Elmore, C.D.
1981. Proline accumulation by water and nitrogen stressed cotton. Crop Sci. 21:244-248.
- McMichael, B.L., and Guinn, G.
1980. The effects of moisture deficits on square shedding. Proc. Beltwide Cotton Prod. Res. Conf. 34:38.
- McMichael, B.L., and Hanney, B.W.
1977. "Endogenous Levels of Abscisic Acid in Water-Stressed Cotton Leaves." Agron. J. 69:979-982.
- McMichael, B.L., and Hesketh, J.D.
1982. Field investigations of the response of cotton to water deficits. Field Crops Res. 5:319-333.
- McMichael, B.L.; Jordan, W.R.; and Powell, R.D.
1972a. An effect of water stress on ethylene production by intact cotton petioles. Plant Physiol. 49:658-660.
- McMichael, B.L.; Jordan, W.R.; and Powell, R.D.
1973. Abscission processes in cotton. Induction by plant water deficit. Agron. J. 65:202-204.
- McMichael, B.L., and Quisenberry, J.E.
1983. Unpublished Results.
- McMichael, S.C.
1959. Hopi cotton a source of cottonseed free of gossypol pigments. Agron. J. 51:630.
- McMichael, S.C.
1960. Combined effects of glandless genes gl_2 and gl_3 on pigment glands in the cotton plant. Agron. J. 52:385-386.
- McNamara, H.C.; Hubbard, J.W.; and Beckett, R.E.
1927. Growth and development of cotton plants at Greenville, Texas. USDA Cir. 401.
- McNamara, H.C.; Hooten, D.R.; and Porter, D.D.
1940. Differential growth rates in cotton varieties and their response to seasonal condition at Greenville, Texas, USDA Tech. Bull. 710.
- McQuigg, J.D., and Calvert, O.H.
1966. Influence of soil temperatures on the emergence and initial growth of upland cotton. Agr. Meteorol. 3:179-185.

- McWilliam, J.R.
1983. Physiological basis for chilling stress and the consequences for crop production *In* C.D Raper, Jr. and P.J. Kramer (eds.), *Crop Reactions to Water and Temperature Stresses in Humid, Temperate Climates*, Westview Press, Boulder, Colorado. pp. 113-132.
- McWilliams, H.M.
1961. Germination testing of cotton seed. M.S. Thesis Mississippi State University, Miss State, MS. pp. 48.
- Medira, E.
1970. Relationships between nitrogen level, photosynthetic capacity, and carboxydismutase activity in *Atriplex patula* leaves. Carnegie Inst. Wash. Yearbook 69:655-662.
- Medina, E.
1971. Effect of nitrogen supply and light intensity during growth on the photosynthetic capacity and carboxydismutase activity of leaves of *Atriplex patula*. Carnegie Inst. Wash. Yearbook 70:551-559.
- Meidner, H.
1969. "Rate limiting" resistances and photosynthesis. *Nature* 222:876-877
- Meidner, H., and Mansfield, T.A.
1965. Stomatal responses to illumination. *Biol. Rev.* 40:483-509.
- Meidner, H., and Mansfield, T.A.
1968. *Physiology of Stomata*. pp. 87-91. McGraw-Hill Book Co., London.
- Meinert, M.C., and Delmer, D.P.
1977. Changes in Biochemical Composition of the cell wall of the cotton fiber during development. *Plant Physiol.* 59:1088-1097.
- Meisner, J., Ascher, K.R.S., and Zur, M.
1977a. Phagodeterrence induced by pure gossypol and leaf extracts of a cotton strain with high gossypol content in the larva of *Spodoptera littoralis*. *J. Econ. Entomol.* 70:149-150.
- Meisner, J.; Kehat, M.; Zur, M.; and Ascher, K.R.S.
1977b. The effect of gossypol on the larvae of the spiny bollworm, *Earias insulana*. *Ent. exp. & appl.* 22:301-303.
- Meisner, J.; Navon, A.; Zur, M.; and Ascher, K.R.S.
1977c. The response of *Spodoptera littoralis* larvae to gossypol incorporated in an artificial diet. *Environ. Entomol.* 6:243-244
- Meisner, J.; Zur, M.; Kabonci, E.; and Ascher, K.R.S.
1977d. Influence of gossypol content of leaves of different cotton strains on the development of *Spodoptera littoralis* larvae. *J. Econ. Entomol.* 70:714-716.
- Menz, K.M., Moss, D.N., Cannell, R.Q.; and Brun, W.A.
1969. Screening for photosynthetic efficiency. *Crop Sci.* 9:692-694
- Meredith, W.R., Jr., and Bridge, R.R.
1973. Yield, yield component and fiber property variation of cotton (*Gossypium hirsutum* L.) within and among environments. *Crop Sci.* 13:307-312.
- Meredith, W.R.; Bridge, R.R., and Chism, J.F.
1967. Seasonal changes in yield and fiber properties of four varieties of cotton. *Miss. Agr. Exp. Sta. Info. Sheet* 998, pp. 2
- Mergeai, G.; Verschraege, L.; and Demol, J.
1985. The Influence of Temperature on Fibre Production and Fibre Physical Properties. *In*. International Institute of Cotton. *Cotton Fibres: Their Development and Properties*. pp.13-16. International Institute for Cotton, Manchester, UK.
- Metzer, R.B.
1961a. Effects of the pneumatic conveyer on seed viability. *Tex. Agr. Exp. Sta.* MP-508
- Metzer, R.B.
1961b. The relationship of tetrazolium stain ratings and certain growth tests of cotton seed. *Proc. Assoc. Off. Seed Anal.* 51:99-105.

- Metzer, R.B.; Johnson, S.P.; and Coffey, L.C.
1961. Effects of calcium treatment on the quality of cottonseed. *Agron. J.* 53:316-319.
- Metzger, H.; Shapiro, M.B.; Mosimann, J.E.; and Vinton, J.E.
1968. Assessment of compositional relatedness between proteins. *Nature* 219:1166-1168.
- Meyer, V.G.
1966. Environmental effects on the differentiation of abnormal cotton flowers. *Amer. J. Bot.* 53:976-980.
- Meyer, V.G.
1969. Some effects of genes, cytoplasm, and environment on male sterility of cotton (*Gossypium*). *Crop Sci.* 9:237-242.
- Mezynski, P.R.
1966. Mechanical and electrical separation of despined cockleburs from mechanically delinted cotton seed. Ph.D. Dissertation. Mississippi State University, Miss. State, MS. pp. 81
- Michaelidis, Z.
1977. Cotton fiber length distribution generation. Ph.D. Dissertation.
- Miernyk, J.A., Thomas, J.; and Trelease, R.N.
1982. A novel role for peroxisomes in oilseed development. *Proc. N.Y. Acad. Sci.* 386:426-429.
- Miernyk, J.A., and Trelease, R.N.
1981a. Control of enzyme activities in cotton cotyledons during maturation and germination. IV. β oxidation. *Plant. Physiol.* 67:341-346.
- Miernyk, J.A., and Trelease, R.N.
1981b. Role of malate synthase in citric acid synthesis by maturing cotton embryos: A proposal. *Plant Physiol.* 67:875-881.
- Miernyk, J.A.; Trelease, R.N.; and Choinski, J.S., Jr.
1979. Malate synthase activity in cotton and other ungerminated oilseeds. *Plant Physiol.* 63:1068-1071.
- Milborrow, B.V.
1974a. Biosynthesis of abscisic acid by a cell-free system. *Phytochem.* 13:131-136.
- Milborrow, B.V.
1974b. The chemistry and physiology of abscisic acid. *Ann. Rev. Plant Physiol.* 25:259-307.
- Milborrow, B.V.
1979. Antitranspirants and the regulation of abscisic acid content. *Aust. J. Plant Physiol.* 6:249-254.
- Milborrow, B.V.
1980. Abscisic acid. *In* F. Skoog (ed.), *Plant Growth Substances*, pp. 262-273. Springer-Verlag, Berlin.
- Miles, D.F., and Copeland, L.O.
1980. The relationship of vigor tests and field performance in soybeans (*Glycine max* (L.) Merr.). *Agron. Abstr.* 1980:111.
- Miller, L.T.
1967. Maintenance of planting cottonseed quality. *Proc. Beltwide Cotton Prod. Mech. Conf.* 1967:23-24.
- Millican, A.A.
1976. A survey and assessment of air pollution damage to California vegetation 1970 through 1974. Dept of Food and Agriculture, California. pp. 47.
- Milthroe, F.L.
1969. The significance and mechanism of stomatal movement. *Aust. J. Sci.* 32:31-35
- Milthroe, F.L., and Spencer, E.J.
1957. Experimental studies of the factors controlling transpiration. III. The interrelations between transpiration rate, stomatal movement and leaf water content. *J. Exp. Bot.* 8:414-437.
- Minton, E.B.
1980. Effects of row spacing and cotton cultivars on seedling diseases *Verticillium* (caused by *Verticillium dahliae*), and yield. *Crop Sci.* 20:347-350.

- Minton, E.B., and Quisenberry, J.E.
1980 Comparison of cottonseed delinting methods in evaluating seed-treatment fungicides. *Agron. J.* 72:573-575.
- Minton, E.B., and Supak, J.R.
1980 Effects of seed density on stand, *Verticillium* wilt, and seed and fiber characteristics. *Crop Sci.* 20:345-347.
- Minyard, J.P., Hardec, D.D.; Gueldner, R.C., Thompson, A.C.; Wiygul, G.; and Hedin, P.A.
1969. Constituents of the cotton bud compounds attractive to the boll weevil. *J. Agric. Food Chem* 17:1093-1097.
- Minyard, J.P.; Thompson, A.C., and Hedin, P.A
1968. Constituents of the cotton bud. VIII. β -Bisabolol, a new sesquiterpene alcohol. *J. Org. Chem.* 33:909-911.
- Minyard, J.P.; Tumlinson, J.H., Thompson, A.C.; and Hedin, P.A
1966 Constituents of the cotton bud. Sesquiterpene hydrocarbons. *J. Agric Food Chem.*
- Mirvalle, R.J
1965. Germination of cotton pollen *in vitro*. *Emp. Cotton Grow. Rev.* 42:287-289.
- Mirsky, A.E.
1951. Some chemical aspects of the cell nucleus *In Genetics in the Twentieth Century*. L.C. Dunn (ed.), MacMillan, NY. pp. 127-153.
- Mirsky, A.E.
1953. The chemistry of heredity. *Sci. Amer.* 188:47-57.
- Mitchell, E.D.; Johnson, B.B., and Whittle, T
1980. β -Galactosidase activity in cultured cotton cells (*Gossypium hirsutum* L.): A comparison between cells growing on sucrose and lactose. *In vitro* 16:907-912
- Mittelheuser, C.J., and van Steveninck, R.F.M.
1969 Stomatal closure and inhibition of transpiration induced by (RS)-abscisic acid. *Nature (London)* 221:281-282.
- Mittelheuser, C.J., and van Steveninck, R.F.M.
1971. Rapid action of abscisic acid on photosynthesis and stomatal resistance. *Planta* 97:83-86
- Mizrabi, J., Blumenfeld, A., and Richmond, A.E.
1970. Abscisic acid and transpiration in leaves in relation to osmotic root stress. *Plant Physiol.* 46:169-171
- Mizrabi, Y., and Richmond, A.E.
1972. Abscisic acid in relation to mineral deprivation. *Plant Physiol.* 50:667-670
- Moffett, J.O.; Stith, L.S.; Morton, H.L.; and Shipman, C.W.
1980. Effect of 2,4 D on cotton yield, floral nectar, seed germination and honeybee visits. *Crop Sci.* 20:747-750.
- Mohapatra, N.; Smith, E.W.; Fites, R.C.; and Noggle, G.R.
1970. Chilling temperature depression of isocitratase activity from cotyledons of germinating cotton. *Biochem. Biophysics Res. Commun.* 40:1253-1258.
- Moline, H.E.; LaMotte, C.E.; Gochnauer, C.; and McNamer, A.
1972. Further comparative studies of pectin esterase in relation to leaf and flower abscission. *Plant Physiol.* 50:655-659.
- Monteith, J.L.
1962. Measurement and interpretation of carbon dioxide fluxes in field. *J. Agr. Sci* 10:334-346
- Monteith, J.L.
1965 Carbon dioxide and crop production. *Agr Prog.* 40:75-82.
- Montezinos, D., and Delmer, D.P.
1980. Characterization of inhibitors of cellulose synthesis in cotton fibers. *Planta* 148:305-311
- Moore, J.H.
1941 The distribution and relation of fiber population, length, breaking load, weight, diameter, and percentage of thin-walled fibers on the cottonseed in five varieties of American upland cotton. *J. Agr. Rev.* 62:255-302.

- Moore, T.C.
1979. "Biochemistry and Physiology of Plant Hormones." Springer-Verlag, New York, Inc.
- Moore, V.P., and Shaw, C.S.
1967. Mechanical damage to cottonseed . . . ginning effects. The Cotton Gin and Oil Mill Press, March 11, 1967 issue.
- Mooseberg, C.A.
1969. Breeding for earliness of maturity in upland cotton. Ark. Agr. Exp. Sta. Bull. 730.
- Moraghan, B.J.; Hesketh, J.D.; and Low, A.
1968. "Effects of temperature and photoperiod on floral initiation among strains of cotton." Cotton Grow. Rev. 45:91-100.
- Moreno-Diaz de la Espina, S.; Medina, F.J.; and Risueño, M.C.
1980. Correlation of nucleolar activity and nucleolar vacuolation in plant cells. Eur. J. Cell Biol. 22:724-729.
- Morgan, P.W.
1980. Synthetic growth regulators: Potential for development. Bot. Gaz. 141:337-346.
- Morgan, P.W.; Beyer, E., Jr.; and Gausman, H.W.
1968. Ethylene effects on auxin physiology. In Biochemistry and Physiology of Plant Growth Substances, F. Wightman and G. Setterfield (eds.), pp. 1255-1273. The Runge Press, Ottawa, Canada.
- Morgan, P.W., and Durham, J.I.
1975. Ethylene-induced leaf abscission is promoted by gibberellic acid. Plant Physiol. 55:308-311.
- Morgan, P.W., and Gausman, H.W.
1966. Effects of ethylene on auxin transport. Plant Physiol. 41:45-52.
- Morgan, P.W., and Hall, W.C.
1962. Effect of 2,4-dichlorophenoxyacetic acid on the production of ethylene by cotton and grain sorghum. Physiol. Plant 15:420-427.
- Morgan, P.W., and Hall, W.C.
1964. Accelerated release of ethylene by cotton following application of indolyl-3-acetic acid. Nature 201:91.
- Morgan, P.W.; Jordan, W.R.; Davenport, T.L.; and Durham, J.I.
1977. Abscission responses to moisture stress, auxin transport inhibitors, and ethephon. Plant Physiol. 59:710-712.
- Morlier, O.W.; Orr, R.S.; and Grant, J.N.
1951. The relation of length to other physical properties of cotton fibers. Text. Res. Jour. 21:6-13.
- Morré, D.J.
1968. Cell wall dissolution and enzyme secretion during leaf abscission. Plant Physiol. 43:1545-1559.
- Morris, D.A.
1962. Elongation of lint hairs in upland cotton in Uganda. Emp. Cotton Grow. Rev. 39:270-276.
- Morris, D.A.
1963. Variation in the boll maturation period of cotton. Emp. Cotton Grow. Rev. 40:114-123.
- Mortensen, L.M., and Moe, R.
1983a. Growth responses of some greenhouse plants to environment. V. Effect of CO₂, O₂, and light on net photosynthetic rate in *Chrysanthemum morifolium*. Ramat. Scientia Hort. 19:133-140.
- Mortensen, L.M., and Moe, R.
1983b. Growth responses of some greenhouse plants to environment. VI. Effect of CO₂ and artificial light on growth of *Chrysanthemum morifolium* Ramat. Scientia Hort. 19:141-147.
- Morton, A.G., and Watson, D.J.
1948. A physiological study of leaf growth. Ann. Bot. 12:281-310.
- Moss, D.N.
1962. The limiting carbon dioxide concentration for photosynthesis. Nature 193:587.

- Moss, D.N.
1976. Studies on increasing photosynthesis in crop plants. In R.H. Burris and C.C. Black (eds), CO₂ Metabolism and Plant Productivity, pp. 31-41. University Park Press, Baltimore
- Moss, D.N.; Musgrave, R.B.; and Lemon, E.R.
1961. Photosynthesis under field conditions. III. Some effects of light, carbon dioxide, temperature, and soil moisture on photosynthesis, respiration, and transpiration of corn. *Crop Sci.* 1:83-87.
- Moss, D.N., and Peaslee, D.E.
1965. Photosynthesis of maize leaves as affected by age and nutrient status. *Crop Sci.* 5:280-281.
- Moss, D.N., and Rawlins, S.L.
1963. Concentration of carbon dioxide inside leaves. *Nature* 197:1320-1321.
- Motta, N., and Medina, E.
1978. Early growth and photosynthesis of tomato (*Lycopersicon esculentum* L.) under nutritional deficiencies. *Turrialba* 28:135-141
- Mueller, S.; Brown, R.M., Jr.; and Scott, T.K.
1976. Cellulosic microfibrils: Nascent stages of synthesis in a higher plant cell. *Science* 194:949-951.
- Munro, J.M.
1971. An analysis of earliness in cotton. *Cotton Grow. Rev.* 48:28-41.
- Muramoto, H.
1969. Hexaploid cottons: Some plant and fiber properties. *Crop Sci.* 9:27-29.
- Muramoto, H.; Hesketh, J.D.; and Elmore, C.D.
1967. Leaf growth, leaf aging and leaf photosynthetic rates of cotton plants. *Beltwide Cotton Prod. Res. Conf. Proc.* pp. 161-165.
- Muramoto, H.; Hesketh, J.D.; and El-Sharkawy, M.
1965. Relationships among rate of leaf area development, photosynthetic rate, and rate of dry matter production among American cultivated cotton and other species. *Crop Sci.* 5:163-166.
- Murashige, T., and Skoog, F.
1962. A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiol. Plant* 15:473-496.
- Murthi, A.N., and Weaver, J.B.
1974. Histological studies on five male-sterile strains of upland cotton. *Crop Sci.* 14:658-663.
- Murty, P.S.S.; Ragu, D.N.; and Rao, G.V.H.
1976. Effect of plant growth regulators on flower and boll drop in cotton. *Food Farming and Agric.*, Feb. 1976, pp. 9-12.
- Mussels, H., and Staples, R.C.
1979. *Stress Physiology in Crop Plants*. Wiley Interscience N.Y.
- Mutsaers, H.J.W.
1976. Growth and assimilate conversion of cotton bolls. 2. Influence of temperature on boll maturation period and assimilate conversion. *Ann. Bot.* 40:317-324.
- Mutsaers, H.J.W.
1983a. Leaf growth in cotton. 1. Growth in area of main-stem and sympodial leaves. *Ann. Bot.* 51:503-520.
- Mutsaers, H.J.W.
1983b. Leaf growth in cotton. 2. The influence of temperature, light, water stress and root restriction on growth and initiation of leaves. *Ann. Bot.* 51:521-529.
- Myers, J.
1971. Enhancement studies in photosynthesis. *Ann. Rev. Plant Physiol.* 22:289-312

N

- Nafziger, E.D., and Köller, H.R.
1976. Influence of leaf starch concentration on CO₂ assimilation in soybean. *Plant Physiol.* 57:560-563.
- Nagarajah, S.
1975a. Effect of debudding on photosynthesis in leaves of cotton. *Physiol. Plant.* 33:28-31.
- Nagarajah, S.
1975b. The relation between photosynthesis and stomatal resistance of each leaf surface in cotton leaves. *Physiol. Plant.* 34:62-66.
- Nagarajah, S.
1981. The effect of nitrogen on plant water relations in tea (*Camellia sinensis*). *Physiol. Plant.* 51:304-308.
- Naithani, S.C.; Rama Rao, N.; Krishnan, P.N.; and Singh, V.D.
1981. Changes in *o*-diphenol oxidase during fiber development in cotton. *Ann. Bot.* 48:379-385.
- Nakayama, F.S., and Bucks, D.A.
1980. Using subsurface trickle system for carbon dioxide enrichment. *In* Tomorrow's Agriculture Today Proc. Fifteenth Natl. Agr. Plastics Cong., April 13-17, 1980. pp. 13-18.
- Namken, L.N.; Heilman, M.D.; and Brown, R.G.
1975. Flowering intervals, days to initial flower, and seedling uniformity as factors for development of short-season cotton cultivars. *Proc. 27th Cotton Improvement Conf.*, pp. 80-85.
- Namken, L.N.; Heilman, M.D.; and Dilday, R.H.
1978. The relationship of fruiting characters in earliness and yield of selected genotypes. *Proc. 1978 Beltwide Cotton Res. Conf.* pp. 93.
- Nanjundayya, C.
1951. Variation in weight per unit length along the length of a cotton fiber and its effect on the determination of other fiber properties. *The Ind. Cotton Grow. Rev.* VI. :171-183.
- Naryanan, K.
1981. Demonstration of auxin binding to strawberry fruit. *Plant Physiol.* 68:1289-1293.
- National Academy of Sciences
1979. Carbon Dioxide and Climate: A Scientific Assessment. National Research Council, Washington, D.C.
- National Cotton Council.
1947-82. Proceedings of Annual Beltwide Cotton Defoliation and Physiology Conferences. National Cotton Council, Memphis.
- National Cotton Council
1949. Cotton Defoliation: Report of Progress, National Cotton Council, Memphis. pp. 20.
- National Cotton Council
1950. Chemical Defoliation of Cotton: Second Report of Progress. National Cotton Council, Memphis. pp. 25.
- National Cotton Research Task Force
1979. Research Opportunities—Seed Quality, Processing, and End Use. *In* The 1979 National Cotton Research Task Force Report, USDA, the State Agricultural Experiment Station, and Cotton Industry Cotton Research Task Force.
- National Cottonseed Products Association.
1977/78. Rules of the National Cottonseed Products Association. *Ann. Session of the Assoc.* 81:57-61.
- Natr, L.
1970. Gas exchange of barley leaves as influenced by mineral nutrient deficiency. *Sci. Agr. Boh* 2:211-218.

Natr, L.

1975. Influence of mineral nutrition on photosynthesis and the use of assimilates. *In* J.P. Cooper (eds.), *Photosynthesis and Productivity in Different Environments*, pp 537-555. Cambridge University Press, Cambridge.

Neales, T.F., and Incoll, L.D.

1968. The control of leaf photosynthesis by the level of assimilate concentration in the leaf: A review of the hypothesis. *Bot Rev.* 34:107-125.

Neales, T.F., and Nicholls, A.O.

1978. Growth responses of young wheat plants to a range of ambient CO₂ levels *Aust J. Plant Physiol.* 5:45-59.

Negi, L.S., and Singh, A.

1956. A preliminary study on the effect of some hormones on yield of cotton. *Ind. Cotton Grow. Rev.* 10:153-156.

Nielsen, K.F., Halstead, R.L.; Maclean, A.J.; Bourget, S.J.; and Holmes, R M.

1961 The influence of soil temperature on the growth and mineral composition of corn, bromegrass, and potatoes. *Soil Sci. Soc. Amer. Proc.* 25:369-372.

Nelson, M.L.; Rousselle, M.A.; Ramey, H H , Jr ; and Barker, G.L.

1980. Closed-boll cotton I. Properties of never-dried cotton fibers before and after aqueous formaldehyde treatment. *Textile Res J.* 50:491-499.

Nelson, W.L.

1949 The effect of nitrogen, phosphorous and potash on certain lint and seed properties of cotton. *Agron. J.* 41:289-293.

Nevins, D.J , and Loomis, R.S.

1970. Nitrogen nutrition and photosynthesis in sugar beet (*Beta vulgaris* L.). *Crop Sci* 10:21-25.

Newcomb, E.H.

1969. Plant microtubulus. *Ann. Rev. Plant Physiol.* 20:253-288.

Newman, E.I

1966. A method of estimating the total length of root in a sample. *Jour. Appl. Ecol.* 3:139-145.

Newman, E.I

1974. Root and soil water relations. *In* E.W Carson (ed.), *The Plant Root and Its Environment*. pp. 363-441., University Press of Virginia

Newman, J.S.

1967. Yields and fiber properties of cotton planted in solid and skip-row systems under minimal soil moisture levels. *Texas Agr. Exp. Sta.*, MP 843.

Newton, P.

1966 The influence of increased CO₂ concentration and supplementary illumination on growth of tomato seedlings during the winter months. *Ann. Appl. Biol.* 57 345-353

Nielsen, K.F.

1974 *Roots and root temperatures.* *In* E W Carson (ed), *The Plant Root and Its Environment*. pp 293-335 University Press of Virginia.

Nielsen, K.F., and Humphries, E.C.

1966. Effects of root temperature on plant growth. *Soils Fertility.* 29:1-7

Nieman, R H , and Paulsen, L.L.

1967. Interactive effects of salinity and atmospheric humidity on the growth of bean and cotton plants. *Bot Gaz* 128:59-73

Niles, G.A.

1967. Cotton seed quality (from the agronomist-geneticist viewpoint). *Proc. Beltwide Cotton Prod Res. Conf* 1967:177-188.

Niles, G.A.

1974. Growth and fruiting characteristics of short-season cottons. *Proc. 26th Cotton Improvement Conf.*, pp. 80.

- Nilsen, S.; Hovland, K.; Dons, C.; and Sletten, S.P.
1983. Effect of CO₂ enrichment on photosynthesis, growth and yield of tomato. *Scientia Hort.* 20:1-14.
- Nilwik, H.J.M.; Gosiewski, W.; and Bierhuizen, J.F.
1982. The influence of irradiance and external CO₂-concentration on photosynthesis of different tomato genotypes. *Scientia Hort.* 16:117-123.
- Nobel, P.S.
1974. *Biophysical Plant Physiology*. W.H. Freeman and Co., pp. 302-364.
- Nobel, P.S.
1977. Internal leaf area and cellular CO₂ resistances: Photosynthetic implications of variations with growth conditions and plant species. *Physiol. Plant.* 40:137-144.
- Noggle, G.R.
1971. Getting and maintaining a stand: Seed germination and seedling emergence. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 72-73.
- Noodén, L.D.
1980. Senescence in the whole plant. *In* K.V. Thimann (ed.), *Senescence in Plants*, pp. 219-257. CRC Press, Boca Raton, FL.
- Noodén, L.D., and Leopold, A.C.
1977. Hormonal control of senescence and abscission. *In* *Plant Hormones and Related Compounds*, D.S. Letham (ed.), pp. 179-213. Elsevier, Amsterdam.
- Nowak-Ossorio, M.; Gruber, E.; and Schurz, J.
1976. Untersuchungen zur cellulosebildung in Baumwollsamem. *Protoplasma* 88:255-263.

O

- Oakley, B.R.; Kirsh, D.R.; and Morris, N.R.
1980. A simplified ultrasensitive silver stain for detecting proteins polyacrylamide gels. *Anal. Biochem.* 105:361-363.
- Oatout, C.H.
1928. The vitality of soybean seed as affected by storage conditions and mechanical injury. *Agron. J.* 20:837-855.
- O'Farrell, P.H.
1975. High resolution two-dimensional electrophoresis of proteins. *J. Biol. Chem.* 250:4007-4021.
- Ojima, M.; Fukui, S.; and Watanabe, I.
1965. Studies on the seed production of soybean. II. Effect of three major nutrient elements supply and leaf age on the photosynthetic activity and diurnal changes in photosynthesis of soybean under constant temperature and light intensity. *Proc. Crop Sci. Soc. Japan* 33:437-442.
- O'Kelly, J.O.
1953. The use of C¹⁴ in locating growth regions in the cell wall of elongating cotton fibers. *Plant Physiol.* 28:281-286.
- O'Kelly, J.O., and Carr, P.H.
1953. Elongation of the cotton fiber. *In* W.E. Loomis (ed.), *Growth and differentiation in plants*. Iowa State College Press. pp. 55-68.
- Olcott, H.S., and Fontaine, T.D.
1941. The absence of lipase in cottonseed. *Oil and Soap* 18:123-124.
- O'Leary, J.W., and Knecht, G.N.
1981. Elevated CO₂ concentration increases stomate numbers in *Phaseolus vulgaris* leaves. *Bot. Gaz.* 142:438-441.
- Olson, S.R., and Bledsoe, R.K.
1942. The chemical composition of the cotton plant and the uptake of nutrients at different stages of growth. *Georgia Exp. Sta. Bull.* 222, pp. 1-16.

- Oimstead, C.E.
1951 Experiments on photoperiodism dormancy and leaf age and abscission in sugar maple. *Bot. Gaz.* 112:365-393.
- Olvey, J.M.; Fisher, W.D.; and Patterson, L.L.
1981 TD-1123. A selective male gametocide. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 84.
- Oosterhuis, D.M., and Wiebe, H.H.
1980 Hydraulic conductivity and osmotic adjustment in drought acclimated cotton. *Plant Physiol.* 65:S-6 (suppl.)
- Osborne, D.J.
1962 Effect of kinetin on protein and nucleic acid metabolism in *Xanthium* leaves during senescence. *Plant Physiol.* 37:595-602
- Osborne, D.J.
1973. Internal factors regulation abscission. *In* *Shedding of Plant Parts*, T.T. Kozlowski (ed.), pp. 125-147. Acad. Press, New York and London.
- Osborne, D.J.
1974. Hormones and the shedding of leaves and bolls. *Cotton Grow. Rev.* 51:256-265.
- Osborne, D.J.
1978. Target cells—New concepts for plant regulation in horticulture. *Sci. Hort.* 30:1-13.
- Osborne, D.J.; Jackson, M.B., and Milborrow, B.V.
1972. Physiological properties of abscission accelerator from senescent leaves. *Nature New Biol* 240:98-101
- Osborne, D.J., and Manchester, J.
1979. Guard cell starch concentration quantitatively related to stomatal aperture. *Plant Physiol.* 64:79-82
- Osborne, D.J., and Moss, S.E.
1963 Effect of kinetin on senescence and abscission in explants of *Phaseolus vulgaris*. *Nature (London)* 200:1299-1301.
- Osman, A.M., and Milthrope, F.L.
1971. Photosynthesis of wheat leaves in relation to age, illuminance, and nutrient supply. II. *Results. Photosynthetica* 5:61-70.
- Osmond, C.B.; Winter, K.; and Powles, S.B.
1980. Adaptive significance of carbon dioxide cycling during photosynthesis in water stressed plants. *In* N.C. Turner and P.J. Kramer (eds.), *Adaptation of Plants to Water and High Temperature Stress*. Wiley Interscience, N.Y. pp. 139-154.
- Owens, L.D.; Lieberman, M., and Kunishi, A.
1971. Inhibition of ethylene production by rhizobitoxine. *Plant Physiol.* 48:1-4.

P

- Paez, A., Hellmers, H.; and Strain, B.R.
1980 CO₂ effects on apical dominance in *Pisum sativum*. *Physiol. Plant* 50:43-46.
- Paez, A., Hellmers, H.; and Strain, B.R.
1983. CO₂ enrichment, drought stress and growth of Alaska pea plants (*Pisum sativum* L.). *Physiol. Plant.* 58:161-165.
- Paizieva, R.Z., Baram, N.I., Sagdieva, M.G.; and Ismailov, A.I.
1977. A study of gossypolone and some of its derivatives. *Khim. Prir. Soedin.* (Tashk) pp. 858-859.
- Pallas, J.E., Bertrand, A.R.; Harris, D.G.; Elkins, C.B., Jr.; and Parks, C.L.
1962. "Research in Plant Transpiration. 1962." Production Research Report No. 87. ARS-USDA-Georgia Agr. Exp. Sta. and Meteorology Dept. U.S. Army Electronics Research and Dev. Activity.

- Pallas, J.E., Jr.
1965. Transpiration and stomatal opening with changes in carbon dioxide content of the air. *Science* 147:171-173
- Pallas, J.E., Jr.
1970. Theoretical aspects of CO₂ enrichment. *Transactions of the Amer. Soc. Agric. Eng.* 13:240-245.
- Pallas, J.E., Jr.
1973. Diurnal changes in transpiration and daily photosynthetic rate of several crop plants. *Crop Sci.* 13:82-84.
- Pallas, J.E., Jr.
1979. Carbon dioxide. In T.W. Tibbitts and T.T. Kozlowski (eds.), *Controlled Environment Guidelines for Plant Research*, Acad. Press, New York, pp. 207-228.
- Pallas, J.E., Jr.; Michel, B.E.; and Harris, D.G.
1967. Photosynthesis, transpiration, leaf temperature, and stomatal activity of cotton plants under varying water potentials. *Plant Physiol.* 42:76-88
- Pallas, J.E., Jr., and Wright, B.G.
1973. Organic acid changes in the epidermis of *Vicia faba* and their implication in stomatal movement. *Plant Physiol.* 51:588-590.
- Pandey, S N., and Thejappa, N.
1975. Study on the relationship between oil, protein and gossypol in cottonseed kernels. *J. Amer. Oil Chem Soc.* 52:312-315.
- Parks, C.R.
1965a. Floral pigmentation studies in the genus *Gossypium*. I. Species specific pigmentation patterns. *Amer. J. Bot.* 52:309-316.
- Parks, C.R.
1965b. Floral pigmentation studies in the genus *Gossypium*. II. Chemotaxonomic analysis of diploid *Gossypium* species. *Amer. J. Bot.* 52:849-856.
- Parks, C.R., Ezell, W.L.; Williams, D.E.; and Dreyer, D.L.
1975. VII. The application of flavanoid distribution to taxonomic problems in the genus *Gossypium*. *Bull. Torrey Bot Club* 102:350-361.
- Parks, C.R.; Sandhu, S.S.; and Montgomery, K.R.
1972. Floral pigmentation studies in the genus *Gossypium*. IV. Effects of different growing environments on flavonoid pigmentation. *Amer. J. Bot.* 59:158-164.
- Parrot, W.L., Jenkins, J.N.; and McCarty, J.C., Jr.
1981. Performance of the high gossypol strain test under artificial infestation of tobacco budworm. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 82.
- Parrot, W.L., and Lane, H.C.
1980. The effect of methomyl treatment on anthocyanin, chlorophyll and condensed tannin content of cotton leaves. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 88.
- Passioura, J.B.
1972. The effect of root geometry on the yield of wheat growing on stored water. *Aust. J. Agric. Res* 23:745-752.
- Pate, J.B., and Duncan, E.N.
1964. Viability of cottonseed after long periods of storage. *Crop Sci.* 4:342-343.
- Patrick, J.W., and Wareing, P.F.
1976. Auxin-promoted transport of metabolites in stems of *Phaseolus vulgaris* L. *J. Exp. Bot.* 27:969-982
- Patterson, D.T., Bunce, J.A.; Alberte, R.S.; and van Volkenburgh, E.
1977. Photosynthesis in relation to leaf characteristics of cotton from controlled and field environments. *Plant Physiol.* 59:384-387.
- Patterson, D.T., and Flint, E.P.
1979. Effects of chilling on cotton (*Gossypium hirsutum*), Velvetleaf (*Abutilon theophrasti*), and Spurred Anoda (*Anoda cristata*). *Weed Sci.* 27:473-478.

- Patterson, D.T., and Flint, E.P.
1980 Potential effects of global atmospheric CO₂ enrichment on the growth and competitiveness of C₃ and C₄ weed and crop plants. *Weed Sci.* 28:71-75.
- Patterson, D.T., and Flint, E.P.
1982 Interacting effects of CO₂ and nutrient concentration on soybean (*Glycine max*), sicklepod (*Gassia obtusifolia*), and showy crotonaria (*Crotalaria spectabilis*). *Weed Sci.* 30:389-394.
- Patterson, L.L.; Buxton, D.R.; and Briggs, R.E.
1978 Fruiting in cotton as affected by controlled boll set. *Agron J.* 70:118-122.
- Parvin, D.W., Jr.; Cooke, F.T.; and Stennis, E.A.
1978. The economics of cotton seed quality. Proc. Beltwide Cotton Prod. Res. Conf. 1978 210-212.
- Paxton, K.W., and Roberts, D.L.
1973. Economic feasibility of storing seed cotton in modules under Louisiana conditions. Field storage processing costs. Dept. Agric. Econ. Agribus, Louisiana State University Agric. Mech. Coll. Agric. Exp. Sta. Rep. No. 456, pp. 99.
- Peacock, H.A., and Hawkins, B.S.
1970. Effect of seed source on seedling vigor, yield and lint characteristics of upland cotton. *Gossypium hirsutum* L. *Crop Sci.* 10:668-670.
- Peacock, H.S.; Reid, J.T.; and Hawkins, B.S.
1971 Cotton (*Gossypium hirsutum* L.) yield, stand and bolls per plant as influenced by seed class and row width. *Crop. Sci.* 11:743-746.
- Pearson, C.J.
1973 Daily changes in stomatal aperture and in carbohydrates and malate within epidermis and mesophyll of leaves of *Commelina cyanea* and *Vicia faba*. *Aust. J. Biol. Sci.* 26:1035-1044.
- Pearson, N.L.
1949a. False moths in cotton: Their origin, description, and variation in number. *J. Agr. Res.* 78:705-717.
- Pearson, N.L.
1949b. Mote types in cotton and their occurrence as related to variety, environment, position in lock, lock size, and number of locks per boll. *USDA Tech. Bull.* No. 100.
- Pearson, R.W.
1974. Significance of rooting pattern to crop production and some problems of root research. In E.W. Carson (ed.), *The Plant Root and Its Environment* pp. 247-270. University Press of Virginia.
- Pearson, R.W., and Lund, Z.F.
1968. Direct observation of cotton root growth under field conditions. *Agron. J.* 60:442-443.
- Pearson, R.W.; Ratliff, L.F.; and Taylor, H.M.
1970. Effects of soil temperature, strength, and pH on cotton seedling root elongation. *Agron. J.* 62:243-246.
- Pearson, G.I.
1980. Carbon Dioxide and Climate: Australian Research. Australian Academy of Science, Canberra, Australia. pp. 217.
- Peavey, D.G.; Stup, M.; and Gibbs, M.
1977 Characterization of starch breakdown in isolated spinach chloroplasts. *Plant Physiol.* 60:305-308.
- Peet, M.M.; Bravado, A.; Wallace, D.H., and Oxbun, J.L.
1977 Photosynthesis, stomatal resistance, and enzyme activities in relation to yield of field-grown dry bean varieties. *Crop Sci.* 17:287-293.
- Peet, M.M., and Kramer, P.J.
1980. Effects of decreasing source/sink ratio in soybeans on photosynthesis, photorespiration, transpiration and yield. *Plant, Cell and Environment* 3:201-206.
- Pegelow, E.J., Jr.; Buxton, D.R.; Briggs, R.E.; Muramoto, H.; and Gensler, W.G.
1977. Canopy photosynthesis and transpiration of cotton as affected by leaf type. *Crop Sci.* 17:1-4.

- Perchorowicz, J.T.; Raynes, D.A.; and Jensen, R.G.
1981. Light limitation of photosynthesis and activation of ribulose biphosphate carboxylase in wheat seedlings. Proc. Nat'l. Acad. Sci. USA 78:2985-2989.
- Perchorowicz, J.T.; Raynes, D.A.; and Jensen, R.G.
1982. Measurement and preservation of the *in vivo* activation of ribulose 1,5-bisphosphate carboxylase in leaf extracts. Plant Physiol. 69:1165-1168.
- Perkins, H.F., and Douglas, A.G.
1965. Effects of nitrogen on yield and certain properties of cotton. Agron. J. 57:383-384.
- Perry, D.A.
1970. The relation of seed vigor to field establishment of garden pea cultivars. J. Agric. Sci., Camb. 74:343-348.
- Perry, D.A.
1978. Report of the vigor test committee 1974-1977. Seed Sci. and Tech. 6:159-181.
- Perry, J.S., and Hall, C.W.
1965. Mechanical properties of pea beans under impact loading. Trans. of the ASAE 8:891-893.
- Perry, S.W.
1981. Photosynthesis: Photorespiration ratios of cotton as affected by genotype and environment. M.S. Thesis. pp. 64.
- Perry, S.W., and Krieg, D.R.
1981. Gross: Net Photosynthesis ratios of cotton as affected by environment and genotype. Proc. Beltwide Cotton Prod. Res. Conf. 35:51-52.
- Peterschmidt, N.A., and Quisenberry, J.E.
1981. Plant water status among cotton genotypes. Proc. 1981 Beltwide Cotton Prod. Res. Conf. pp. 43-44.
- Petkar, B M.; Oka, P.G.; and Sundaram, V.
1977. Cross-sectional shape of fibers of different group lengths in a sample of cotton. ISCI Journal: 23-27.
- Phelps, R.A., Cherry, J.P.; Hyer, A.H.; Cavanagh, G.C.; Harper, G.A.; Jernigan, J.E.; Hess, D.C.; and Lorraine, D.G.
1979. Advancements in cottonseed quality-Industry's viewpoint. Cotton Gin and Oil Mill Press 80:14-15.
- Phillips, J.R.; Herzog, G.A.; and Nicholson, W.F.
1977. Effect of chlordimeform on fruiting characteristics and yield of cotton. Ark. Farm. Res. 27:4-5.
- Phillips, M
1964. Ribonucleoprotein particles from storage tissue of mature seeds. Biochem. Biophys. Acta 91:350-351.
- Pillay, K P., and Shankaranarayana, K S.
1961. Variation in the properties of cotton fibers with length. Text Res. J. 31:515-525.
- Pillet, P.E., et Collet, G.
1960. Etude du nanisme I. Action de l'acide gibberellique sur la croissance et la destruction *in vitro* des auxines. Bull. Soc. Bot. Suisse, 70:180-194.
- Pinckard, J.A., and Melville, D.
1977. Cottonseed quality affects stand and yield. Proc. Beltwide Cotton Prod. Res. Conf. pp. 25-26.
- Pinkas, L.L.H.
1972. Modification of flowering in Pima cotton with ethephon. Crop Sci. 12:465-466.
- Pinkhasov, Y.I.
1981. Photosynthesis, transport of photosynthetic products, and development of methods of regulating transport in cotton. Biology Bulletin of the Academy of Sciences of the USSR. 8:231-241.
- Pinkhasov, Y.I. and Tkachenko, L.V.
1981. Competitive relations in assimilate consumption between different fruits of cotton plants. Translated from Fiziologiya Rastenii 28:130-135.

- Plaut, Z.; Halevy, A.H., and Diskin, Y.
1975 Diurnal pattern of plant water status and CO₂ fixation of roses as affected by irrigation regimes. *J. Amer. Soc. Hort. Sci.* 100:191-194.
- Pollock, E.G., and Jensen, W.A.
1964. Cell development during early embryogenesis in *Capsella* and *Gossypium*. *Amer. J. Bot.* 51:915-921.
- Pollock, B.M., and Roos, E.E.
1972. Seed and seedling vigor Vol. 1:314-388. In T.T. Kozłowski (ed.), *Seed Biology*. Acad. Press, New York.
- Pons, W.A., Hoffpauir, C.L.; and Hopper, T.H.
1953. Gossypol in cottonseed. Influence of variety of cottonseed environment. *Agric. Food Chem.* 1:1115-1118.
- Pope, O.A., and Ware, J.O.
1945. Effect of variety, location and season on oil, protein, and fuzz on cottonseed and on fiber properties of lint. *USDA Tech. Bull.* No. 903
- Popova, P.Y.; Nuritdinova, F.N., Imamaliyev, A.I.; and Madzhitova, K.D.
1979. Differences in phenol-compound content and character of fiber formation in wild and cultivated cotton. *Sel'sk. Nauk. Im. V.I. Lenina* No. 8 pp. 22-25.
- Porter, D.D.
1936. Positions of seeds and nodes in locks and lengths of cotton fibers from bolls borne at different positions on plants at Greenville, TX. *USDA Tech. Bull.* 509.
- Porterfield, J., and Smith, E.M.
1956. Physical characteristics and field performance of mechanically graded acid-delinted cottonseed. *Oklahoma Agr. Sta. Tech. Bull.* T-60. pp. 24.
- Portis, A.R., Jr.; Chon, C.J.; Mosbach, A.; and Heldt, H.W.
1977. Fructose and sedoheptulose biphosphatase: The sites of a possible control of CO₂ fixation by light-dependent changes of the stromal Mg²⁺ concentration. *Biochimica et Biophysica Acta*, 461:313-325
- Potter, J.R., and Breen, P.J.
1980. Maintenance of high photosynthetic rates during the accumulation of high leaf starch levels in sunflower and soybean. *Plant Physiol.* 66:528-531.
- Potts, H.C.
1978. Hard seeded soybeans. *Proc. 8th Soybean Seed Res. Conf. (ASTA)* 8:33-42.
- Potts, H.C.; Daungapatra, J.; Hairston, W.G.; and Delonche, J.C.
1975. Some influences of hardseededness on soybean seed quality. *Crop Sci.* 18:221-224.
- Powell, R.D.
1969. Effect of temperature on boll set and development of *Gossypium hirsutum*. *Cotton Grow Rev.* 46:29-36.
- Powell, R.D., and Morgan, P.W.
1973. A test system for the germination of cotton seed. *Cotton Grow. Rev.* 50:268-273.
- Powles, S.B.
1979. The role of carbon assimilation and photorespiratory carbon cycling in the avoidance of photoinhibition in intact leaves of C₃ and C₄ plants. Ph.D. Dissertation, Australian National University.
- Prakash, G.
1976. A senescence factor and foliar abscission in *Catharanthus roseus*. *Ann. Bot.* 40:537-541.
- Pratt, C., and Wender, S.H.
1959. Identification of rutin and isoquercitrin in cottonseed. *J. Amer. Oil Chem. Soc.* 36:392-394.
- Pratt, C., and Wender, S.H.
1961. Identification of kaempferol-3-rhamnoglucoside and quercetin-3-glucoglucoside in cottonseed. *J. Amer. Oil Chem. Soc.* 38:403-404.
- Prentice, A.N.
1972. *Cotton with Special Reference to Africa*. Longman, London. pp. 282.

- Preiss, J., and Levi, C.
1979. Metabolism of starch in leaves. *In* Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes, M. Gibbs, and E. Latzko (eds.), Encyclopedia of Plant Physiology, Vol. 6. Springer-Verlag, N.Y. pp. 282-312
- Preiss, J., and Levi, C.
1980. Starch biosynthesis and degradation. *In* P.K. Stumpf and E.E. Conn (eds.), The Biochemistry of Plants, Vol. 3, Acad Press, N.Y. pp. 371-423.
- Presley, J.T.
1958. Relation of protoplast permeability to cottonseed and predisposition to seedling disease. *Plant Dis. Repr.* 42:852.
- Presley, J.T., and Christiansen, M.N., and Carns, H.R.
1967. Pathological and physiological aspects of seed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* 1967:189-192.
- Presley, J.T., and Leonard, O.A.
1948. The effect of calcium and other ions on the early development of the radicle of cotton seedlings. *Plant Physiol.* 23:516-525.
- Price, H.J., and Smith, R.H.
1977. Tissue culture of *Gossypium* species and its potential in cotton genetics and crop improvement. *Beltwide Cotton Prod. Res. Conf. National Cotton Council, Memphis, TN.* pp. 51-55.
- Price, H.J., and Smith, R.H.
1979. Somatic embryogenesis in suspension cultures of *Gossypium klotzschium* Anderss. *Planta* 145:305-307.
- Prokofev, A.A.; Rasulov, S., and Bokarev, K.S.
1977. Physiologically active substances as regulators of cotton growth and productivity. *Soviet Plant Physiol.* 24:597-601.
- Puente, F.
1966. Some effects of soil temperature and phosphorus and calcium levels on cotton seedling growth. *Dissertation Abstr.* XXVI:4157.
- Pundir, N.S.
1972. Experimental embryology of *Gossypium arboreum* L. and *G. Hirsutum* L. and their reciprocal crosses. *Bot. Gaz.* 133:7-26.
- Purohit, A.W., and Tregunna, E.B.
1974. Effects of carbon dioxide on *Pharbitis*, *Xanthium*, and *Silene* in short days. *Can. J. Bot.* 52:1283-1291.

Q

- Quarrie, S.A.
1980. Genotypic differences in leaf water potential, abscisic acid and proline concentrations in spring wheat during drought stress. *Ann. Bot.* 46:383-394.
- Quintanilha, A.; Salazar, D'Eca L.; and Cabral, A.
1962. Desenvolvimento do butao flora do algodoeiro em funcao do tempo. *Bol. Soc. Broteriana* 36 (Ser. 2a).189-215.
- Quisenberry, J.E., and Gipson, J.R.
1974. Growth and productivity of cotton grown from seed produced under four night temperatures. *Crop Sci.* 14:300-302.
- Quisenberry, J.E.; Jordan, W.R.; Roark, B.A.; and Fryrear, D.W.
1981. Exotic cotton as genetic sources for drought resistance. *Crop Sci.* 21:889-895.
- Quisenberry, J.E., and Kohel, R.J.
1975. Growth and development of fiber and seed in upland cotton. *Crop Sci.* 15:463-467

- Quisenberry, J.E., Ray, L.L.; and Jones, D.L.
1975. Responses of upland cotton to selection for fiber length and fineness in a nonirrigated semiarid environment. *Crop Sci.* 15:407-409.
- Quisenberry, J.E., and Roark, B.
1976. Influence of indeterminate growth habit on yield and irrigation water-use efficiency in upland cotton. *Crop Sci.* 16:762-765

R

- Radin, J.W.
1977 Contributions of the root systems to nitrate assimilation in whole cotton plants. *Aust. J. Plant Physiol.* 4:811-819.
- Radin, J.W.
1981. Water relations of cotton plants under nitrogen deficiency. IV. Leaf senescence during drought and its relation to stomatal closure. *Physiol. Plant.* 51:145-149
- Radin, J.W.
1983a. Control of plant growth by nitrogen: Differences between cereals and broadleaf species. *Plant Cell, and Env.* 6:65-68.
- Radin, J.W.
1983b. Physiological consequences of cellular water deficits Osmotic adjustment. *In* H.M. Taylor, W.R. Jordan, and T.R. Sinclair (eds.), *Limitations to Efficient Water Use in Crop Production*. American Society of Agronomy, Madison, Wisconsin. pp 267-276
- Radin, J.W., and Ackerson, R.C.
1981. Water relations of cotton plants under nitrogen deficiency. III. Stomatal conductance, photosynthesis, and abscisic acid accumulation during drought. *Plant Physiol.* 67:115-119
- Radin, J.W., and Boyer, J.S.
1982. Control of leaf expansion by nitrogen nutrition in sunflower plants: Role of hydraulic conductivity and turgor. *Plant Physiol.* 69:771-775.
- Radin, J.W., and Elmore, C.D.
1980. Concepts of translocation with special reference to the assimilation of nitrogen and its movement into fruits *In* J.D. Hesketh and J.W. Jones (eds.), *Predicting Photosynthesis for Ecosystem Models*, Vol. II. CRC Press, Boca Raton, FL. pp 143-154.
- Radin, J.W., and Parker, L.L.
1979a Water relations of cotton plants under nitrogen deficiency I Dependence upon leaf structure *Plant Physiol.* 64:495-498
- Radin, J.W., and Parker, L.L.
1979b Water relations of cotton plants under nitrogen deficiency II. Environmental interactions on stomata. *Plant Physiol.* 64:499-501.
- Radin, J.W.; Parker, L.L.; and Gunn, G.
1982. Water relations of cotton plants under nitrogen deficiency V. Control of abscisic acid accumulation and stomatal sensitivity to abscisic acid. *Plant Physiol.* 70:1066-1070.
- Radin, J.W.; Parker, L.L., and Sell, C.R.
1978. Partitioning of sugar between growth and nitrate reduction in cotton roots. *Plant Physiol.* 62:550-553.
- Radin, J.W., and Sell, C.R.
1975 Some factors limiting nitrate reduction in developing ovules of cotton. *Crop Sci.* 15:713-715
- Radin, J.W., and Trelease, R.N.
1976. Control of enzyme activities in cotton cotyledons during maturation and germination. I. Nitrate reductase and isocitrate lyase. *Plant Physiol.* 57:902-905.
- Raes, G.; Franssen, T.; and Verschraege, L.
1968. Study of the reversal phenomenon in the fibrillar structure of the cotton fiber *Text. Res. Journ.* 38:182-195

- Racs, G.; Franssen, T.; and Verschraege, L.
1971. Headlines of a study reversal phenomenon in the fibrillar structure of the cotton fibers. *Ann. Sci. Text. Belg.* pp. 68-90.
- Rajanna, B.
1972. Heat damage to cottonseed (*Gossypium hirsutum* L.) and its effects on seed quality and plant growth and development. Ph.D. Dissertation. Mississippi State University, Miss. State, MS. pp. 100.
- Rajaraman, S., and Nanjundayya, C.
1955. Variation of certain fiber properties with group-lengths of a cotton with special reference to pressley strength index. *The Ind. Cotton Grow. Rev.* X:236, 242.
- Ramakrishnon, C.U., and Nevgi, G.U.
1951. Studies on enzyme lipase. *Proc. Indian Acad. Sci.* 33B, pp. 268-276.
- Ramchandani, S.; Joshi, P.C.; and Pundir, N.S.
1966. Seed development in *Gossypium* L. *Indian Cotton Journ.* 20:97-106.
- Ramey, H.H., Jr.
1970. Quality control concepts in cotton production. *Cotton Grow Rev.* 47:305-309.
- Ramey, H.H., Jr.
1980. Fiber crops, Chapter 2. In C.S. Hoveland (ed.), *Crop Quality, Storage and Utilization*, Crop Science Society of America, Madison, Wisconsin pp. 35-39.
- Ramey, H.H., Jr.; Lawson, R.; Duckett, K.E.; and French, A.L.
1982. Effect of boll age and mercerization on cotton fiber properties. *Text. Res. Journ.* 52:250-255.
- Ramey, H.H., Jr., and Worley, S., Jr.
1973. Use of yield models to compare products of breeding programs. *Beltwide Cotton Prod. Res. Conf. Proc.* pp. 63.
- Ramsey, J.C., and Berlin, J.D.
1976a. Ultra-structure of early stages of fiber differentiation. *Bot. Gaz.* 139:11-19.
- Ramsey, J.C., and Berlin, J.D.
1976b. Ultra-structural aspects of early stages in cotton fiber elongation. *Amer. J. Bot.* 63:868-876.
- Randolph, L.F., and Cox, L.G.
1943. Factors influencing the germination of Iris seed and the relation of inhibiting substances of embryo dormancy. *Proc. Amer. Soc. Hort. Sci.* 43:284-304.
- Rani, A., and Bhojwani, S.S.
1976. Establishment of tissue cultures of Cotton. *Plant Sci. Lett.* 7:163-169.
- Ranney, C.D., and Wooten, O.B.
1966. Effect of petroleum mulch on the growth and yield of cotton. *Proc. Joint Mtg. 26th Cotton Dis Council, 20th Cotton Defol.—Physiol. Conf. and 18th Cotton Improvement Conf.* pp. 327-335.
- Rao, S.R.; Carter, F.L.; and Frampton, V.L.
1963. Determination of available lysine in oilseed meal proteins. *Anal. Chem.* 35:1927-1930.
- Raper, C.D., Jr., and Downs, R.J.
1973. Factors affecting the development of flu-cured tobacco grown in artificial environments. IV. Effects of carbon dioxide depletion and light intensity. *Agron. J.* 65:247-252.
- Raper, C.D., Jr., and Peedin, G.F.
1978. Photosynthetic rate during steady-state growth as influenced by carbon-dioxide concentration. *Bot. Gaz.* 139:7-149.
- Rappaport, L.
1980. Plant growth hormones: Internal control points. *Bot. Gaz.* 141:125-130.
- Raschke, K.
1972. Saturation kinetics of the velocity of stomatal closure in response to CO₂. *Plant Physiol* 49:229-234.
- Raschke, K.
1974. Abscisic acid sensitizes stomata to CO₂ in leaves of *Xanthium strumarium* L. *Proc. 8th International Conf. on Plant Growth Substances, Tokyo.* pp. 1151-1158.

- Raschke, K
1975a. Simultaneous requirement of carbon dioxide and abscisic acid for stomatal closing in *Xanthium strumarium* L. *Planta* 125:243-259
- Raschke, K
1975b. Stomatal action. *Ann. Rev. Plant Physiol.* 26:309-340.
- Raschke, K.
1976. How stomata resolve the dilemma of opposing priorities. *Philos. Trans. Roy. Soc. London Ser. B* 273:551-560.
- Raschke, K.
1979. Movements of stomata. Chapter 4. In W. Haupt and M.E. Feinleib (eds), *Encyclopedia of Plant Physiology new series*, Vol 7. pp. 383-441. Springer-Verlag, Berlin.
- Raschke, K.; Pierce, M., and Popielka, C.C.
1976. Abscisic acid content and stomatal sensitivity to CO₂ in leaves of *Xanthium strumarium* L. after pretreatments in warm and cold growth chambers. *Plant Physiol.* 57:115-121.
- Rast, L.E.
1917. Cotton varieties in Georgia. Variation of the oil content of cottonseed and resistance to disease. *Bull. Ga. Coll. Agric.* 121. pp.36.
- Ratner, A.; Goren, R., and Monselise, S P
1969. Activity of pectin esterase and cellulase in the abscission zone of citrus leaf explants. *Plant Physiol.* 44:1717-1723.
- Raven, J.A., and Rubery, P.H.
1982. Coordination development: Hormone receptors, hormone action and hormone transport. In H. Smith and D. Grierson (eds), *The Molecular Biology of Plant Development*, Blackwell Scientific, Oxford, pp 28-48.
- Ray, L.L.
1963. Systemic induction of parthenocarpic fruit set in cotton with gibberellin. *Crop Sci.* 3:448-449
- Ray, L.L.
1972. Growth and fruiting comparisons of early maturing lines of cotton. *Proc. 24th Cotton Improvement Conf.*, pp. 64-65.
- Ray, L.L., and Minton, E.B.
1973. Effects of field weathering on cotton lint yield-seed quality-fiber quality. *Texas Agr. Exp. Sta. Bull.* MP-1118.
- Ray, L.L., and Richmond, T.R.
1966. Morphological measures of earliness of crop maturity in cotton. *Crop Sci.* 6:527-531.
- Ray, L.L., and Supak, J.
1977. Performance of glandless cotton varieties in the Texas High Plains. *Texas Agr. Exp. Sta. Misc. Publ.* 1338, pp. 4.
- Ray, P.M
1980. Early auxin and fusicoicin effects on b-glucan synthetase activity in peas. *Plant Physiol (supp.)* 65(b):131.
- Rea, H.E.
1928. Location of "motes" in the upland cotton lock. *Agron. J.* 20:1064-1068
- Rea, H.E.
1929. Varietal and seasonal variation of "motes" in upland cotton. *Agron. J.* 21 481-486.
- Reddy, V R.
1981. "Validation of the Cotton Simulation Model GOSSYM." Ph.D. Dissertation. Mississippi State University.
- Reddy, V.R.; Sekhara, C; and Prabhaker, A S
1979. Preliminary studies on the effect of seed soaking with cycocel on the germination and early growth of groundnut and cotton. *Food, Farming and Agr.* 10:330-332.
- Reeves, R.G.
1936. Comparative anatomy of the seeds of cotton and other malvaceous plants. *Amer. J. Bot.* 23:394-405.

- Reeves, R.G., and Beasley, J.O.
1935. The development of the cotton embryo. *J. Agric. Res.* 51:935-944.
- Rehm, M.M., and Cline, M.G.
1973. Rapid growth inhibition of *Avena* coleoptile segments by abscisic acid. *Plant Physiol.* 51:93-96.
- Reicosky, D.C.; Millington, R.J.; Klute, A.; and Peters, D.B.
1972. Patterns of water uptake and root distribution of soybeans (*Glycine max.*) in the presence of a water table. *Agron. J.* 64:292-297.
- Reid, P.D.; Lew, F.T.; and Lewis, L.N.
1971. Cellulase isozymes in *Phaseolus vulgaris* abscission zones. *Plant Physiol.* 47S:42.
- Reid, P.D.; Strong, P.G.; Lew, F.; and Lewis, L.N.
1974. Cellulase and abscission in the red kidney bean (*Phaseolus vulgaris*). *Plant Physiol.* 53:732-737.
- Reyes, L.
1980. Performance of Texas A&M multi-adversity resistant (TAM-MAR) cottons in the Texas Coastal Plains. *Texas Agr. Exp. Sta. Prog. Rept.* 3757. pp. 13.
- Reynolds, A.C., and Maravolo, N.C.
1973. Phenolic compounds associated with development in the liverwort *Marchantia polymorpha*. *Amer. J. Bot.* 60:406-413.
- Reynolds, R.
1968. Quick-starting cotton. *The Furrow.* April/March pp. 10.
- Ribereau-Gayon, P.
1972. *Plant Phenolics.* Hafner Publishing Co. N.Y.
- Richards, R.A., and Passioura, J.B.
1981a. Seminal root morphology and water use of wheat. I. Environmental effects. *Crop Sci.* 21:249-252.
- Richards, R.A., and Passioura, J.B.
1981b. Seminal root morphology and water use of wheat. II. Genetic variation. *Crop Sci.* 21:253-255.
- Richmond, T.R., and Fulton, H.J.
1936. Variability of fiber length in a relatively uniform strain of cotton. *J. Agric. Res.* 53:749-761.
- Richmond, T.R., and Radwan, S.R.H.
1962. Comparative study of seven methods of measuring earliness of crop maturity in cotton. *Crop Sci.* 2:397-400.
- Rijks, D.A.
1965. The use of water by cotton crops in Abyan, South Arabia. *J. Appl. Ecol.* 2:317-343.
- Rikin, A.; Atsmon, D.; and Giller, C.
1979. Chilling injury in cotton (*Gossypium hirsutum* L.): Prevention by abscisic acid. *Plant & Cell Physiol.* 20:1537-1546.
- Riley, J.A.; Newton, D.H.; Measells, J.W.; Downey, D.A.; and Hand, L.
1964. Soil temperatures and cotton planting in the mid-South. *Miss. Agr. Exp. Sta. Bull.*, pp. 678.
- Riov, J.
1974. A polygalacturonase from citrus leaf explants: Role in abscission. *Plant Physiol.* 53:312-316.
- Ritchie, J.T., and Burnett, E.
1971. Dryland evaporative flux in a subhumid climate: II. Plant influences. *Agron. J.* 63:56-62.
- Rivera, C.M. and Penner, D.
1978. Effect of calcium and nitrogen on soybean (*Glycine max*) root fatty acid composition and uptake of linuron. *Weed Sci.* 26:647-650.
- Roane, C.W., and Starling, T.M.
1958. Effects of mercury fungicides and insecticides on germination, stand, and yield of sound and damaged seed wheat. *Phytopath.* 48:219-233.

- Roark, B.; Pfrimmer, T.R.; and Merkle, M.E.
1963. Effect of some formulations of methyl parathion, toxaphene, and DDT on the cotton plant. *Crop Sci* 3:338-341.
- Roark, B., and Quisenberry, J.E.
1977. Environmental and genetic components of stomatal behavior in two genotypes of upland cotton. *Plant Physiol.* 59:354-356.
- Roberts, D.L.; Paxton, K.W., and Gill, R.L.
1973. The module system: A new approach in storing seed cotton. *La. Agric.* 16:4-5, 7.
- Roberts, D.L.; Paxton, K.W.; and Koonce, K.L.
1974. The effect of module storage on cotton quality. D.E.A. Research Report No. 471. Louisiana State University, Baton Rouge, ALA pp. 37.
- Robertson, F.R., and Campbell, J.G.
1933. Some observations on the increase of free fatty acid in cottonseed. *Oil and Soap* 10:146-147.
- Rodgers, J.P.
1980a. Cotton fruit development and abscission: Growth and morphogenesis. *South African J. of Sci.* 76 90-92
- Rodgers, J.P.
1980b. "Cotton Fruit Development and Abscission Changes in Endogenous Abscisic Acid-like Substances." *South African J. of Sci.* 76 471-474.
- Rodgers, J.P.
1981a. Cotton fruit development and abscission Variations in the level of auxins *Trop Agr (Trin.)* 58 63-72
- Rodgers, J.P.
1981b. Cotton fruit development and abscission: Fluctuations in the level of cytokinins. *J. of Hort. Sci.* 56 99-106.
- Rodgers, J.P.
1981c. Cotton fruit development and abscission. The role of gibberellin-like components. *South African J. of Sci.* 77:363-366.
- Roelofsen, A.
1959. The plant cell wall in *Handbuch der Pflanzenanatomie*. Gebrüder Borntraeger, Berlin pp 227-242
- Rogers, H.H., Beck, R.D.; Gingham, G.E.; Cure, J.D., Davis, J.M.; Heck, W.W.; Rawlings, J.D.; Riordan, A.J.; Stonit, N.; Smith, J.M.; and Thomas, J.F.
1981. Response of Vegetation to Carbon Dioxide. Progress Report of Research. Field Studies of Plant Responses to Elevated Carbon Dioxide Levels. No. 005. Botany Department, North Carolina State University, Raleigh
- Rogers, H.H., Bingham, G.E.; Cure, J.D.; Heck, W.W.; Heagle, A.S.; Israel, D.W.; Smith, J.M., Surano, K.A.; and Thomas, J.F.
1980. Response of Vegetation to Carbon Dioxide. Progress Report of Research. Field Studies of Plant Responses to Elevated Carbon Dioxide Levels. No. 001. Botany Department, North Carolina State University.
- Rogers, H.H.; Bingham, G.E.; and Thomas, J.F.
1982a. Response of Vegetation to Carbon Dioxide. Progress Report of Research: Field Studies of Plant Responses to Elevated Carbon Dioxide Levels. No. 009. Joint Program of the U.S. Department of Energy and the USDA. Botany Department, North Carolina State University, Raleigh. pp. 231.
- Rogers, H.H.; Bingham, G.E.; Thomas, J.F.; Smith, J.M.; Israel, D.W.; and Surano, K.A.
1982b. Effects of long-term carbon dioxide concentrations on field grown crops and trees. *In* Global Dynamics of Biospheric Carbon, U.S. Department of Energy, Washington, D.C. pp. 9-45.
- Rogers, H.H.; Heck, W.W., and Heagle, A.S.
1982c. A field technique for the study of plant responses to elevated carbon dioxide concentrations. *J. Air Pollution Control Assoc.* 33:42-44

Roland, J.C.; Vian, B.; and Reis, D.

1975. Observations with cytochemistry and ultracyotomy on the fine structure of the expanding walls in actively elongating plants. *J. Cell. Sci.* 19:239-259.

Rollins, M.L.

1945. Applications of Nitrogen dioxide treatment to the microscopy of fiber cell wall structure. *Text. Res. Journ.* 15:65-77.

Rollins, M.L.

1968a. The cotton fiber. Chap. 3 in *The American Cotton Handbook*.

Rollins, M.L.

1968b. Cell wall structure and cellulose synthesis. *Forest Products Journ.* 18:91-100.

Roncadori, R.W.; McCarter, S.M.; and Crawford, J.L.

1971. Influence of fungi on cotton seed deterioration prior to harvest. *Phytopath.* 61:1326-1328

Rose, C.W., and Stern, W.R.

1967. Determination of withdrawal of water from soil by crop roots as a function of depth and time. *Aust. J. Soil Res.* 5:11-19.

Rose, R.J.; Setterfield, G.; and Fowke, L.C.

1972. Activation of nucleoli in tuber slices and the function of nucleolar vacuoles. *Expt. Cell Res.* 71:1-16.

Rosenberg, N.J.

1981. The increasing CO₂ concentration in the atmosphere and its implication in agricultural productivity. I. Effects in photosynthesis, transpiration, and water use efficiency. *Climate Change* 3:265-279.

Ross, A.F., and Wilhamson, C.E.

1951. Physiologically active emanations from virus infected plants. *Phytopath.* 41:431.

Rossi-Fanelli, A.

1968. Investigations of the physical and physico-chemical properties of cottonseed proteins to obtain basic information needed for the increased utilization of cottonseed. Project UR-15-(40)-33, Istituto di Chimica Biologica, Rome, Italy.

Rossi-Fanelli, A.; Antonini, E.; Brunori, M.; Bruzzesi, M.R.; Caputo, A.; and Satriani, F.

1964. Isolation of a monodisperse protein fraction from cottonseeds. *Biochem. Biophys. Res. Comm.* 15:110-115

Rossi-Fanelli, A.; Cavallini, D.; Mondoni, B.; Wolf, A.M.; Scioscia-Santoro, A.; and Riva, F.

1965. *Asch Biochem, Biophysics* 110:85-90.

Rousselle, M.A.; Nelson, M.L.; Ramey, H.H., Jr.; and Barker, G.L.

1980. Closed-boll cotton. III. Effect of treatment with propylene oxide on sorptive and mechanical properties of fibers and yarns. *Ind. Eng. Chem. Prod. Res. Dev.* 19:654-659.

Rubern, P.H.

1981. Auxin receptors. *Ann. Rev. Plant Physiol.* 32:569-596.

Rubinstein, B., and Leopold, A.C.

1962. Effects of amino acids on bean leaf abscission. *Plant Physiol.* 37:398-401.

Rubinstein, B., and Leopold, A.C.

1963. Analysis of auxin control of bean leaf abscission. *Plant Physiol.* 38:262-267.

Rubinstein, B., and Leopold, A.C.

1964. The nature of leaf abscission. *Quart. Rev. Biol.* 39:356-372.

Rusca, R.A., and Gerdes, F.L.

1942. Effects of artificially drying seed cotton on certain quality elements of cottonseed in storage. *USDA Circular No. 615*.

Russell, E.J., and Appleyard, A.

1915. The atmosphere of the soil: Its composition and the causes of variation. *J. Agric. Sci.* 7:1-48.

Russell, R.A., and Goss, M.J.

1974. Physical aspects of soil fertility—The response of roots to mechanical impedance. *Neth. J. Agric. Sci.* 22:305-318.

- Russell, R.S.
1977. *Plant Root Systems, Their Function and Interaction With the Soil*. McGraw-Hill Book Co. London.
- Russell, T.E., Watson, T.F.; and Ryan, G.F.
1976. Field accumulation of aflatoxin in cottonseed as influenced by irrigation termination dates and pink bollworm infestation. *Appl. and Environ. Microbiol.* 31:711-713.
- Ruyack, J., Downing, M.R.; Chang, J.S.; and Mitchell, E.D.
1979. Growth of callus and suspension culture cells from cotton varieties (*Gossypium hirsutum* L.) resistant and susceptible to *Xanthomonas malvacearum* (E.F. Sm.). *Dows In vitro* 15:368-373.
- Ryffel, G.U., and McCarthy, B.J.
1975. Complexity of cytoplasmic RNA in different mouse tissues measured by hybridization of polyadenylated RNA to complementary DNA. *Biochemistry* 14:1379-1385.
- Ryle, G.J.A., and Hesketh, J.D.
1969. Carbon dioxide uptake in nitrogen-deficient plants. *Crop Sci.* 9:451-454.
- Ryser, J.
1977. Cell wall growth in elongating cotton fibers: An autoradiographic study. *Cytobiologie*, 15:78-84.
- Rzedowski, J.
1979. *Vegetación de México*. Editorial Limusa, Mexico City pp. 432.

S

- Saad, S.I.
1951. Studies on the physiology of the cotton plant. III. Effect of shading, defoliation, and debudding on development, flowering and shedding of the cotton plant. *Proc. Egypt Acad. Sci.* 7:59-74.
- Sabino, N.P.
1975. Efeitos da aplicacao de calcario, fosforo e potassio, na qualidade da fibra do algodocairo cultivado em latossolo roxo. *Bragantia* 34:153-161.
- Sacher, J.A.
1957. Relationship between auxin and membrane-integrity in tissue senescence and abscission. *Science* 125:1199-1200.
- Sacher, J.A.
1969. Hormonal control of senescence of bean endocarp: Auxin suppressor of RNase. *Plant Physiol.* 44:313-314.
- Sadykov, A.S.
1972. Polyphenolic compounds of *Gossypium* and *Hibiscus* species. *In Chemistry of Natural Products*, pp. 256-264.
- St. Angelo, A.J., and Altschul, A.M.
1964. Lipolysis and the free fatty acid pool in seedlings. *Plant Physiol.* 39:880-883.
- St. Omer, L., and Horvath, S.M.
1983a. Elevated CO₂ atmospheres and whole plant senescence. *Ecology* Submitted.
- St. Omer, L., and Horvath, S.M.
1983b. Potential effects of elevated carbon dioxide levels on seed germination of three native plant species. *Environ. Exp. Bot.* Submitted.
- St. John, J.B., and Christiansen, M.N.
1976. Inhibition of linolenic acid synthesis and modification of chilling resistance in cotton seedlings. *Plant Physiol.* 57:257-259.
- Sakolnik, M.
1948. Seed treatment with mercury dusts injurious to corn with mechanical injuries to embryos. *Phytopath.* 38:82-87.

- Saleem, M.B., and Buxton, D.R.
1976 Carbohydrate status of narrow row cotton as related to vegetative and fruit development. *Crop Sci.* 16:523-526.
- Saminy, C.
1967. The effect of plant population and carbon dioxide on the growth and yield of soybeans (*Glycine max.* L. Merr.) grown in a modified environment of plastic greenhouses. M.S. Thesis, Department of Agronomy, University of Arizona, Tucson.
- Sanders, J.L., and Brown, D.A.
1979. Measurement of rooting patterns for determinate and indeterminate soybean genotypes with a fiberoptic scope. *In* J.L. Harley and R. Scott Russell (eds.), *The Soil-Root Interface*, Acad. Press. pp. 369-379.
- Sandstedt, R.
1971. Cytokinin activity during development of cotton fruit. *Physiol. Plant.* 24:408-410.
- Sandstedt, R.
1975 Habituated cultures from two cotton species. *Beltwide Cotton Prod. Res. Conf. National Cotton Council, Memphis, TN.* pp. 52-53.
- Santelmann, P.W.; Scifres, C.J.; and Murray, J.
1966. Influence of postemergence herbicides on the fiber quality of selected cotton varieties. *Crop Sci.* 6:561-562
- Sappenfield, W.P., and Dilday, R.H.
1980 Breeding high terpenoid cottons the 1978 regional tests *Proc. Beltwide Cotton Prod Res. Conf.* pp. 92-93.
- Sarvella, P.
1964. Variation of cytoplasmic male-sterile cotton with environment. *Agron. Abstr.* pp. 78-79.
- Sarvella, P.
1966. Environmental influences on sterility in cytoplasmic male-sterile cottons. *Crop Sci.* 6:361-364.
- Satler, S.O., and Thimann, K.V.
1983. Metabolism of oat leaves during senescence. VII. The interaction of carbon dioxide and other atmospheric gases with light in controlling chlorophyll loss and senescence. *Plant Physiol.* 71:67-70.
- Sattelmacher, B., and Marschner, H.
1978 Nitrogen nutrition and cytokinin in *Solanum tuberosum*. *Physiol. Plant.* 42:185-189.
- Scarsh, G.W.
1932. Mechanism of the action of light and other factors on stomatal movement. *Plant Physiol.* 7:481-504
- Schenk, R.V., and Hildebrandt, A.C.
1972 Medium and techniques for induction and growth of monocotyledonous and dicotyledonous plant cell cultures. *Can. J. Bot.* 50:199-204.
- Schnarrenberger, C., and Fock, H.
1976. Interactions between organelles involved in photorespiration. *In* C.R. Stocking and U Heber (eds.), *Encyclopedia of Plant Physiology*, New Ser. 3:185-234.
- Scholl, R.L.
1974. Inheritance of isocitratase activity and its relationship to seedling vigor in a cross of upland cotton. *Crop Sci.* 14:296-300.
- Scholl, R.L.
1976. Variability within *Gossypium hirsutum* L. for seedling isocitratase activity. *Crop Sci.* 16:701-703.
- Scholl, R.L., and Miller, P.A.
1976. Genetic association between yield and fiber strength in upland cotton. *Crop Sci.* 16:780-783.
- Schubert, A.M.; Benedict, C.R.; Berlin, J.D.; and Kohel, R.J.
1973. Cotton fiber development kinetics of cell elongation and secondary wall thickening. *Crop Sci.* 13:704-709.

- Schubert, A.M.; Benedict, C.R.; Gates, C.E.; and Kohel, R.J.
1976. Growth and development of the lint fibers of Pima S-4 cotton. *Crop Sci.* 16:539-543
- Schult, S., and Dörffling, K.
1981. Evidence against an intermediary role of abscisic acid in stomatal closure induced by phenylmercuric acetate and farnesol. *Physiol. Plant.* 53:487-490
- Schulz, P., and Jensen, W.A.
1977. Cotton embryo-genesis: The early development of the free nuclear endosperm. *Amer. J. Bot.* 64:384-394.
- Schuster, M.F., and Lane, H.C.
1980. Evaluation of high-tannin cotton lines for resistance to bollworms. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 83-84.
- Scott, C.L.
1979. Production practices for better quality planting seed. *Proc. Beltwide Cotton Prod. Mech. Conf.* pp. 54-56.
- Seaman, F.; Lukefahr, M.J.; and Mabry, T.J.
1977. The chemical basis of the natural resistance of *Gossypium hirsutum* L. to *Heliothis*. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 102-103.
- Seale, C.C.
1942. Studies in oil formation in the V 135 and MSI varieties of sea island cotton in St. Vincent, B.W.I. *Trop. Agric.* 19:210-214.
- Scarle, N.E.
1965. Physiology of flowering. *Ann. Rev. Plant Physiol.* 16:97-118.
- Sellschop, J.P.F., and Salmon, S.C.
1928. The influence of chilling, above freezing point on certain crop plants. *J. Agric. Res.* 37:315-338
- Sestak, Z.; Catsky, J.; and Jarvis, P.G.
1971. *Plant Photosynthetic Production: Manual of Methods.* Dr. W. Junk, N.V. Publishers, The Hague. pp. 818.
- Setter, T.L.; Brun, W.A.; and Brenner, M.L.
1980. Stomatal closure and photosynthetic inhibition in soybean leaves induced by petiole girdling and pod removal. *Plant Physiol.* 65:884-887.
- Sevacharian, V., and El-Zik, K.M.
1983. A slide rule for cotton crop and insect management. Univ. of California Cooperative Ext. Serv., Leaflet 21361, pp. 13. Davis, CA.
- Sexton, P.D., and Gerard, C.J.
1982. Emergence force of cotton seedlings as influenced by salinity. *Agron. J.* 74:699-702.
- Sexton, R., and Hall, J.L.
1974. Fine structure and cytochemistry of the abscission zone cells of *Phaseolus* leaves. I. Ultrastructural changes occurring during abscission. *Ann. Bot.* 38:849-854.
- Shannon, L.M.; de Vellis, J., and Yew, J.Y.
1963. Malonic acid biosynthesis in bush bean roots. II. Purification and properties of the enzyme catalyzing oxidative decarboxylation of oxalacetate. *Plant Physiol.* 38:691-697.
- Shannon, M.C., and Francois, L.E.
1977. Influence of seed pre-treatments on salt tolerance of cotton during germination. *Agron. J.* 69:619-622.
- Sharkey, T.D., and Raschke, K.
1981. Separation and measurement of direct and indirect effects of light on stomata. *Plant Physiol.* 68:33-40.
- Sharpe, P.J.H.
1973. Adaxial and Abaxial stomatal resistance of cotton in the field. *Agron. J.* 65:570-574
- Shaver, T.N.; Dilday, R.H.; and Wilson, F.D.
1980. Use of glandless stocks to evaluate unknown *Heliothis* growth inhibitors (X-factors) in cotton. *Crop Sci.* 20:545-548.

- Shaver, T.N., and Lukefahr, M.J.
1969. Effect of flavonoid pigments and gossypol on growth and development of the bollworm, tobacco budworm, and pink bollworm. *J. Econ. Entomol.* 62:643-646.
- Shaw, C.S., and Franks, G.N.
1962. Cottonseed drying and storage at cotton gins. Technical Bulletin No. 1262. USDA-ARS U.S. Government Printing Office, Washington, D.C.
- Shaw, C.S., and Franks, G.N.
1963. Cottonseed handling at gins. ARS, USDA. Production Research Report No. 66.
- Shaw, C.S., and Franks, G.N.
1964. Cotton seed handling and storage at gins. *In Handbook for Cotton Ginners.* ARS, USDA. Agriculture Handbook No. 260. pp. 70-81.
- Shawcroft, R.W.; Lemon, E.R.; Allen, L.H., Jr.; Stewart, D.W.; and Jensen, S.E.
1974. The soil-plant-atmosphere model and some of its predictions. *Agr. Meteorol.* 14:287-307.
- Shear, C.B.; Cranc, H.L.; and Myers, A.T.
1946. Nutrient element balance A fundamental concept in plant nutrition. *Proc. Amer. Soc. Hort. Sci.* 47:239-248.
- Sheffield, F.M.L.
1936. The early development of the cotton fiber. *Emp. Cotton Grow. Rev.* pp. 177-280.
- Sherbakoff, C.D.
1927. A modified method of delinting cottonseed with sulfuric acid. *Phytopath.* 17:189-193.
- Sheriff, D.W.
1979. Stomatal aperture and the sensing of the environment by guard cells. *Plant, Cell. and Env.* 2:15-22.
- Shimshi, D.
1970a. The effect of nitrogen supply on transpiration and stomatal behaviour of beans (*Phaseolus vulgaris* L.). *New Phytol.* 69:405-412.
- Shimshi, D.
1970b. The effect of nitrogen supply on some indices of plant-water relations of beans. (*Phaseolus vulgaris* L.). *New Phytol.* 69:413-424.
- Shimshi, D., and Kafkafi, U.
1978. The effect of supplemental irrigation and nitrogen fertilization on wheat (*Triticum aestivum* L.). *Irr. Sci.* 1:27-38.
- Shimshi, D., and Marani, A.
1971. Effects of soil moisture stress on two varieties of upland cotton in Israel II. The northern negev region. *Experimental Agriculture* 7:225-239.
- Shindy, W.W., and Smith, O.E.
1975. Identification of plant hormones from cotton ovules. *Plant Physiol.* 55:550-554.
- Sicher, R.C.; Hatch, A.L.; Stumpf, D.K.; and Jensen, R.C.
1981. Ribulose 1-5 bisphosphate and activation of carboxylase in the chloroplast. *Plant Physiol.* 68:252-255.
- Sievers, A.F., and Lowman, M.S.
1932. Study of cottonseed with reference to varietal characteristics and sources of production. USDA, Bull. Plant Ind., pp. 20.
- Sigman, J.C., Jr.
1973. Characterization and treat-ability studies of acid cottonseed delinting waste. M.S. Thesis. Mississippi State University, Miss. State, MS. pp. 88.
- Silhavy, T.J.; Benson, S.A.; and Emr, S.D.
1980. Mechanisms of protein localization. *Micro. Rev.* 47:313-344.
- Simon, E.W.
1978. Membranes in dry and imbibing seeds. *Dry Biological Systems* ISBN.
- Simmons, J.G.; Cherry, J.P.; Colwick, R.F.; Barker, G.L.; Wesley, R.A.; Williford, J.; Hudspeth, E.B.; Laird, J.W.; and Baker, R.V.
1979. Unopened cottonboll harvesting—evaluation of cottonseed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 32-36.

- Simpson, D.M.
1935a. Dormancy and maturity of cottonseed. *J. Agr. Res.* 50:429-434
- Simpson, D.M.
1935b. Relation of moisture content and method of storage to deterioration of stored cottonseed. *J. Agr. Res.* 50:449-456.
- Simpson, D.M.
1942. Factors affecting the longevity of cottonseed. *J. Agr. Res.* 64:407-419
- Simpson, D.M.
1946. The longevity of cottonseed as affected by climate and seed treatments. *J. Amer. Soc. Agron.* 38:32-45
- Simpson, D.M.; Adams, C.L.; and Stone, G.M.
1940. Anatomical structure of the cottonseed coat as related to problems of germination. USDA Tech Bull No 734.
- Simpson, D.M., and Miller, P.R.
1944. The relation of atmospheric humidity to moisture in cottonseed. *J. Amer. Soc. Agron.* 36:957-959.
- Simpson, D.M., and Stone, B.M.
1935. Viability of cottonseed as affected by field conditions. *J. Agric. Res.* 50:435-447
- Simpson, M.E., and Marsh, P.B.
1977. Vascular anatomy of cotton carpels as revealed by digestion in ruminal fluid. *Crop Sci.* 17:819-821.
- Simpson, M.E.; Marsh, P.B.; Merola, G.V.; Ferretti, R.J.; and Filsinger, E.C.
1973. Fungi that infect cottonseeds before harvest. *Appl. Microbiol.* 26:608-613.
- Simpson, R.J.; Neuberger, M.R.; and Liu, T.Y.
1976. Complete amino acid analysis of proteins from a single hydrolysate. *J. Biol. Chem.* 251:1936-1940.
- Singh, G., and Kumar, S.
1978. Effect of some defoliants on boll opening and yield of cotton. *Ind. J. Agr. Sci.* 48:632-636.
- Singh, J., and Diekert, J.W.
1973. Types and molecular weights of subunits of arachin-P₆. *Prep. Biochem.* 3:73-82
- Singh, O., and Singh, O.S.
1975. Effect of growth regulators on early fibre development in cotton. *Ind. J. Exp. Biol.* 13:411-412.
- Singh, S.
1970. Revolution in cotton yield with CCC. *Indian Fmg.* 20:5-6.
- Singh, S., and Singh, K.
1972. Effect of seed treatment with succinic acid on the performance of cotton (*Gossypium arboreum* L.) *Indian J. Agric. Sci.* 42:112-114.
- Singh, S.P.
1975. Studies on the effects of soil moisture stress on the yield of cotton. *Ind. J. Plant Physiol.* 18:49-55.
- Sionit, N.
1983. Response of soybean to two levels of mineral nutrition in CO₂-enriched atmosphere. *Crop Sci.* 23:329-333
- Sionit, N.; Mortensen, D.A.; Strain, B.R., and Hellmers, H.
1981a. Growth response of wheat to CO₂ enrichment and different levels of mineral nutrition. *Agron. J.* 73:1023-1027.
- Sionit, N.; Strain, B.R.; and Beckford, H.A.
1981b. Environmental controls on the growth and yield of okra. I. Effects of temperature and of CO₂ enrichment at cool temperature. *Crop Sci.* 21:885-888.
- Sionit, N.; Strain, B.R.; and Hellmers, H.
1981c. Effects of different concentrations of atmospheric CO₂ on growth and yield components of wheat. *J. Agr. Sci., Cambridge.* 79:335-339.

- Sionit, N.; Strain, B.R.; Hellmers, H.; and Kramer, P.J.
1981d. Effects of atmospheric CO₂ concentration and water stress on water relations of wheat. *Bot. Gaz.* 142:191-196.
- Sionit, N.; Hellmers, H.; and Strain, B.R.
1980. Growth and yield of wheat under CO₂ enrichment and water stress. *Crop Sci.* 20:687-690.
- Sionit, N.; Hellmers, H.; and Strain, B.R.
1982. Interaction of atmospheric CO₂ enrichment and irradiance on plant growth. *Agron. J.* 74:721-725
- Sitaram, M.S., and Abraham, E.S.
1973. Note on effect of gibberellic acid on quality of *Tamx* cotton. *Cotton Grow. Rev.* 50:150-151.
- Sitton, D.; Itai, C.; and Kende, H.
1967. "Decreased Cytokinin Production in the Roots as a Factor in Shoot Senescence." *Planta* 73:297-300.
- Sjogren, B., and Spychalski, R.
1930. The molecular weight of cocosin. *J. Amer. Chem. Soc.* 52:4400-4404.
- Skoog, F.
1940. Relationships between zinc and auxin in the growth of higher plants. *Amer. J. Bot.* 27:939-951.
- Skoog, F., and Armstrong, D.J.
1970. Cytokinins. *Ann. Rev. Plant Physiol.* 21:359-384.
- Skovsted, A.
1935. Cytological studies in cotton. III. A hybrid between *Gossypium davidsoni* Kell, and *G. sturtii* F. Muell. *J. Genet.* 30:397-405.
- Slatyer, R.O.
1967. *Plant-Water Relationships*. Acad. Press, New York. pp. 366.
- Slatyer, R.O., and Bierhuizen, J.F.
1964a. The influence of several transpiration suppressants on transpiration, photosynthesis, and water-use efficiency of cotton leaves. *Aust. J. Biol. Sci.* 17:131-146.
- Slatyer, R.O., and Bierhuizen, J.F.
1964b. Transpiration from cotton leaves under a range of environmental conditions in relation to internal and external diffusive resistances. *Aust. J. Biol. Sci.* 17:115-130.
- Salvik, B.
1965. *In Water Stress in Plants*. The Hague: W. Junk. pp. 322.
- Smith, E.W.
1972. Biochemical effects of low temperature on cottonseed germination. Ph.D. Dissertation, N.C. State University, Raleigh, Niv. Microfilms, Ann Arbor, MI
- Smith, E.W., and Fites, R.C.
1973. The influence of chilling temperature alteration of glyoxysomal succinate levels on isocitrate activity from germinating seedlings. *Biochem. Biophys. Res. Commun.* 55:647-654.
- Smith, E.W.; Fites, R.C.; and Noggle, G.R.
1971. Effects of chilling temperature on isocitrate and malate synthetase levels during cotton seed germination. *Beltwide Cotton Prod. Res. Conf.*, pp. 45-47
- Smith, F.G.
1952. The mechanism of the tetrazolium reaction in corn embryos. *Plant Physiol.* 27:445-456.
- Smith, J.H.C.
1944. Concurrency of carbohydrate formation and carbon dioxide absorption during photosynthesis in sunflower leaves. *Plant Physiol.* 19:394-402.
- Smith, K.A., and Russell, R.S.
1969. Occurrence of Ethylene and its significance in anaerobic soil. *Nature (London)* 222:769-771.
- Smith, L.L.
1975. Aeration of cottonseed in storage. Market Research Report No. 1020. USDA-ARS, U.S. Government Printing Office, Washington, D.C.

- Smith, R.H., and Price, H.J.
1978. Root organogenesis from *Gossypium* callus. Beltwide Cotton Prod. Res. Conf. Proc. pp 38-39. National Cotton Council, Memphis, TN
- Smith, R.H., Price, H.J.; and Thaxton, J.B.
1977. Defined conditions for the initiation and growth of cotton callus *in vitro* I. *Gossypium arboreum*. *In vitro* 13:329-334.
- Smith, R.H.; Schubert, A.M.; and Benedict, C.R.
1974. Development of isocitrate lyase activity in germinating cotton seed. *Plant Physiol* 54:197-200.
- Smutzer, G., and Berlin, J.D.
1976. The use of Nomarski interference contrast microscopy as an alternative to the staining of Epon sections following autoradiography. *Trans. Amer. Micro. Soc* 95:109-112.
- Smutzer, G., and Berlin, J.D.
1975. Ultrastructural aspects of cotton fiber differentiation as influenced by night temperature. *Texas Rep. Biol. and Med* 33:362-363.
- Snow, J.P.; Crawford, S.H.; Berggren, G.T.; and Marshall, J.G.
1981. Growth regulator tested for boll rot control. *Louisiana Agric.* 24:3-24.
- Snyder, F.W., and Carlson, G.E.
1978. Photosynthate partitioning in sugarbeet. *Crop Sci.* 18 657-661.
- Sonneborn, T.M.
1950. The cytoplasm in heredity. *Heredity* 4:11-36.
- Sood, D.R., Kumar, V; and Dhindsa, K.S.
1976. Composition of cottonseed as affected by N, P, and K application. *Agrochimica* 20 77-81.
- Sorour, F.A.
1963. Certain factors affecting manganese and molybdenum accumulation and distribution in the cotton plant. Ph.D. Dissertation. Texas A&M University.
- Sorour, F.A., and Rassoul, S.F.A.
1974. Effect of shading at different stages of growth of the cotton plant on flowering and fruiting, boll shedding, yield of seed cotton and earliness. *Libyan J. Agr.* 3:39-43
- Sorenson, J.W., and Wilkes, L.H.
1959. Storage of cottonseed for planting purposes. MP-326. Texas Agr. Exp. Sta., College Station, TX
- Sorenson, J.W., and Wilkes, L.H.
1973. Seed quality and moisture relationships in harvesting and storing seed cotton. Report to Cotton Incorporated. Raleigh, NC
- Spieth, A.M.
1933. Anatomy of the transition region in *Gossypium*. *Bot. Gaz.* 95:338-347.
- Spooner, A.E.; Brown, D.A., and Waddle, B.A.
1958. Effects of irrigation on cotton fiber properties. *Univ. Ark. Agr. Exp. Sta. Bull.* 601 pp. 27.
- Spreafico, L.
1965. Injured seed, germination and abnormal seedlings in wheat. *Proc. Int. Seed Test Assoc.* 30:727-736
- Staelin, L.A.
1976. Reversible particle movements associated with unstacking and restacking of chloroplast membranes *in vitro*. *J. Cell Biol.* 71:136-158.
- Stalfelt, M.G.
1959. The effect of carbon dioxide on hydroactive closure of the stomatal cells. *Physiol. Plant.* 12:691-705.
- Stansbury, M.F.; Cucullu, A.F.; and Hartog, G.T.D.
1954. Cottonseed contents variation. Influence of variety and environment on oil content of cottonseed kernels. *Agr. Food Chem.* 2 692-696.

- Stansbury, M.F.; Hoffpauir, C.L.; and Hopper, T.H.
1953a. Influence of variety and environment of the iodine value of cottonseed oil. *J. Amer. Oil Chem. Soc.* 30:120-123.
- Stansbury, M.F.; Pons, W.A.; and Hartog, G.T.D.
1956. Relations between oil, nitrogen, and gossypol in cottonseed kernels. *J. Amer. Oil Chem. Soc.* 33:282-286.
- Stansbury, M.F.; Pons, W.A.; and Hoffpauir, C.L.
1953b. Phosphorus compounds in cottonseed kernels. Influence of variety of cottonseed and environment. *Agric. Food Chem.* 1:75-78
- Stanway, V
1960. Laboratory germination of cottonseed at three different temperatures. *Proc. Assoc. Off. Seed Anal.* 50:97-100.
- Stanway, V.
1962. Rate of germination of cottonseed at a constant and two alternating temperatures. *Proc. Assoc. Off. Seed Anal.* 52:104-108.
- Stedbronsky, V.L.
1964. Materials handling fans and piping. *In Handbook for Cotton Ginners.* pp. 60-68. ARS, USDA. Agriculture Handbook No. 260.
- Stedman, E., and Stedman, E.
1950. Cell specificity of histones. *Nature* 166:780-781.
- Steel, R.G.D., and Torrie, J.H.
1960. Principles and Procedures of Statistics. McGraw-Hill Book Co., New York, NY. pp. 481.
- Steele, J.A.; Uchytel, T.F.; Durbin, R.D.; Bhatnagar, P.; and Rich, D.H.
1976. Chloroplast coupling factor 1: A species-specific receptor for tentoxin. *Proc. Natl. Acad. Sci., USA*, 73:2245-2248.
- Steen, D.A., and Chadwick, A.V.
1981. Ethylene effects in Pea stem tissue. Evidence of microtubule mediation. *Plant Physiol.* 67:460-466.
- Stepanichenko, N.N.; Ten, L.N.; Tyshchenko, A.A.; Avazkhodzhaev, M.K.; Mukhamedzhanov, S.Z.; and Otroshchenko, O.S.
1980. Metabolites of the pathogenic fungus *Verticillium dahliae*. X. Induction of phytoalexins in the cotton plant by metabolites in the pathogen. *Khim. Prir. Soedin. (Tashk)* 3 397-406.
- Sterrett, J.P.; Leather, G.R.; and Tozer, W E.
1973. Synergistic interaction between endothall and ethephon in abscission. *Plant Physiol.* 51:(S-29)37.
- Stewart, J. McD.
1972. Histochemistry of cotton fiber initiation. Beltwide Cotton Prod. Res. Conf. Proc. Memphis, TN. pp. 102.
- Stewart, J. McD.
1974. Relationship between fiber length increase and seed volume increase-revisited. *Proc. Beltwide Cotton Prod Res. Conf.* pp. 142-143.
- Stewart, J. McD.
1975. Fiber initiation on the cotton ovule [*Gossypium hirsutum*]. *Amer. J. Bot.* 62:723-730.
- Stewart, J. McD.
1979. Use of ovule cultures to obtain interspecific hybrids of *Gossypium*. *In J.T. Barber (ed.), Plant tissue culture.* pp. 44-56. Symposium So Sec Am. Soc. Plant Physiol., Tulane Univ., New Orleans.
- Stewart, J.M.
1981. *In vitro* fertilization and embryo rescue. *Envir. Exp. Bot.* 21:301-315.
- Stewart, J. McD., and Cunningham, S.
1985. Two New *Gossypium* Species From Western Australia. *Proc. Beltwide Cotton Res. Conf. New Orleans, La.*

- Stewart, J. McD., and Duncan, E.N.
1976. Cottonseed viability after long-time storage. *Agron. J.* 68:243-244.
- Stewart, J. McD., and Guinn, G.
1971. Response of cotton mitochondria to chilling temperatures. *Crop Sci.* 11:908-910
- Stewart, J. McD., and Hsu, C.L.
1977a. In-ovulo embryo culture and seedling development of cotton (*Gossypium hirsutum* L.). *Planta* 137:113-117
- Stewart, J. McD., and Hsu, C.L.
1977b. Influence of phytohormones on the response of cultured cotton ovules to (2-chloroethyl) phosphonic acid. *Physiol. Plant.* 39:79-85.
- Stewart, J. McD., and Hsu, C.L.
1978. Hybridization of diploid and tetraploid cottons through in-ovulo embryo culture. *J. Hered.* 69:404-408
- Stewart, J. McD., and Kerr, T.
1974. Relationship between fiber-length increase and seed-volume increase in cotton (*Gossypium hirsutum* L.). *Crop Sci.* 14:118-120
- Stipanovic, R. D.; Bell, A.A.; and Lukefahr, M. J.
1977. Natural insecticides from cotton (*Gossypium*). In P.A. Hedin (ed.), ACS Symposium Series. No. 62. Host Plant Resistance to Pests. Amer. Chem. Soc.
- Stipanovic, R. D.; Bell, A. A.; and O'Brien, D.H.
1980. Raimondal, a new sesquiterpenoid from pigment glands of *Gossypium raimondii*. *Phytochem.* 19:1735-1738.
- Stipanovic, R. D.; Greenblatt, G.A.; Beier, R. C.; and Bell, A.A.
1981. 2-Hydroxy-7-methoxycadalene. The precursor of lacinilene C 7-methyl ether in *Gossypium*. *Phytochem.* 20:729-730.
- Stipanovic, R.D.; Wakelyn, P.J., and Bell, A.A.
1975. Lacinilene C, a revised structure, and lacinilene C 7-methyl ether from *Gossypium* bracts. *Phytochem.* 14:1041-1043
- Stutt, M., and Heldt, H.W.
1981. Physiological rates of starch breakdown in isolated intact spinach chloroplasts. *Plant Physiol.* 68:755-761.
- Stocking, C.R., and Ongun, A.
1962. The intracellular distribution of some metallic elements in leaf. *Amer. J. Bot.* 49:284-289.
- Stockton, J. R.; Doneen, L. D.; Walhoad, J.T.
1961. Boll shedding and growth of the cotton plant in relation to irrigation frequency. *Agron. J.* 53:272-275
- Stockton, J.R., and Walhoad, V.T.
1960. Effect of irrigation and temperature on fiber properties. *Proc. 14th Ann. Beltwide Cotton Defol. Physiol. Conf.* pp. 11-14.
- Stolzy, L.H.
1974. Soil atmosphere. In E.W. Carson (ed.), pp. 335-363. *The Plant Root and Its Environment*, University Press of Virginia.
- Stone, R.B.; Christiansen, M.N.; Nelson, S.O.; Webb, J.C.; Goodenough, J.L.; and Statson, L.E.
1973. Induction of germination of impermeable cottonseed by electrical treatment. *Crop Sci.* 13:159-161
- Strain, B.R.
1978a. Effects of global carbon dioxide enrichment on plants; A Partially annotated bibliography. U.S. Dept. of Energy and Environ. Protection Agency, Washington, D.C.
- Strain, B.R.
1978b. Report of the workshop on anticipated plant response to global carbon dioxide enrichment, 4-5 August 1977, Dept. of Botany, Duke University, Durham, NC. pp. 91.

Strain, B.R.

1982. Ecological aspects of plant responses to carbon dioxide enrichment. In S. Brown (ed.), *Global Dynamics of Biospheric Carbon*, pp. 46-55, U.S. Dept. of Energy CONF-8108131 pp. 194.

Strain, B.R., and Armentano, T.V.

1982. Environmental and societal consequences of a possible CO₂ industrial climate change Response of "unmanaged" ecosystems. National Technical Information Service, U.S. Dept. of Commerce, Springfield, VA 22161. DOE/EV/10019-12. pp. 46.

Strain, B.R., and Bazzaz, F.

1983. Terrestrial communities. In E. Lemon (ed.), *CO₂ and plants: The Response of Plants to Rising Levels at Atmospheric Carbon Dioxide*. AAAS Publ., Washington, D.C. pp. 280.

Strain, B.R.; Goeschl, J.D.; Jaeger, C.H.; Fares, Y.; Magnuson, C.E.; and Nelson, C.E.

1983. Measurement of carbon fixation and allocation using ¹⁴C-labeled carbon dioxide. Radiocarbon. In Press.

Strain, B.R., and Sionit, N.

1982. Direct Effects of Carbon Dioxide on Plants: A Bibliography. Department of Botany, Duke University, Durham, NC. pp. 66

Struck, R.F., and Kirk, M.C.

1970. Methylated flavonols in the *Gossypium*. J. Agric. Food Chem 18:548-549.

Subbiah, K.K., and Mariakulandai, A.

1972. Application of gibberellic acid and naphthalene acetic acid in preventing bud and boll shedding in Cambodia cotton. Madras Agric. J. 59:350-352.

Stumpf, P.K.

1976. Lipid metabolism, In *Plant Biochemistry* J. Bonner, and J.E. Varner (eds.), Acad. Press, NY. pp. 428-462.

Sung, F.J.M., and Krieg, D.R.

1979. Relative sensitivity of photosynthetic assimilation and translocation of ¹⁴C to water stress. Plant Physiol. 64:852-856.

Sturkie, D.G.

1934. A study of lint and seed development in cotton as influenced by environmental factors. J. Amer. Soc. Agron. 26:1-24.

Sturkie, D.G.

1947. Effects of some environmental factors on the seed and lint of cotton. Alabama Agr. Exp. Sta., Bull 263.

Suryatmana, G.; Copeland, L.O.; and Miles, D.F.

1980. Comparison of laboratory indices of seed vigor with field performance of navy bean. (*Phaseolus vulgaris L.*). Agron. Abstr. 1980:113.

Suy, T.B.

1979. Contribution of l'etude de la croissance des tubes polliniques chez *Gossypium hirsutum L.* en fonction des conditions du milieu. Cot. Fib. Trop. 34:295-300.

Svedberg, T., and Pederson, K.O.

1940. The Ultracentrifuge. Clarendon Press, Oxford.

Swain, T.

1965. The tannins, In *Plant Biochemistry* J. Bonner, and J. E. Varner (eds.), Acad. Press, New York.

T

Tackett, J.L., and Pearson, R.W.

1964. Oxygen requirements of cotton seedling roots for penetration of compacted soil cores. Proc. Soil Sci. Amer. 28:600-605.

Takami, S., and van Bavel, C.H.M.

1975. Numerical experiments on the influence of CO₂ release at ground level on crop assimilation and water use. Agr. Meteor. 15:193-203.

- Tamas, I.A., Atkins, B.D.; Ware, S.M.; and Bidwell, R.G.S.
1972. Indoleacetic acid stimulation of phosphorylation and bicarbonate fixation by chloroplast preparations in light. *Can. J. Bot.* 50:1523-1527.
- Tamas, I.A.; Schwartz, J.W.; Hagin, J.M., and Simonds, R.
1974. Hormonal control of photosynthesis in isolated chloroplasts. *In Mechanisms of Regulation of Plant Growth*, R.L. Bialeski, A.R. Ferguson, and M.M. Cresswell (eds.), Bull. 12, pp. 261-268. Royal Soc. New Zealand, Wellington.
- Tao, K.J.
1980a. Vigor "referee" test for soybean and corn. *Assoc. Off. Seed Anal. Newslett.* 54:40-58.
- Tao, K.J.
1980b. The 1980 vigor "referee" test for soybean and corn seed. *Assoc. Off. Seed Anal. Newslett.* 54:53-68.
- Tao, K.J.
1980c. Effect of seed treatment on the conductivity vigor test for corn. *Plant Physiol.* 65.S 141.
- Tarchevskit, I.A.; Lozovaya, V.V.; Ruseva, L.G.; and Markova, M.N.
1980. The supply of macroergic phosphates in synthesis of cotton cellulose. *Fizid. Rast.* 27 1052-1055.
- Tarter, C.K.
1983. Carbon dioxide levels in the plant microenvironment as influenced by a poly-coated paper mulch, M.S. Thesis, Colorado State University, Fort Collins, CO. pp. 85
- Taylor, D.M.
1965. The manganese nutrition of cotton. Ph.D. Dissertation. Texas A&M University.
- Taylor, H.M.
1983. Managing root systems for efficient water use: An overview. *In Limitations to Efficient Water Use in Crop Production*, H.M. Taylor, W.R. Jordan, and T.R. Sinclair (eds.) pp.87-113. Amer. Soc. Agron., Madison
- Taylor, H.M., and Gardner, H.R.
1963. Penetration of cotton seedling taproots as influenced by bulk density, moisture content, and strength of soil. *Soil Sci.* 96 153-156.
- Taylor, H.M.; Huck, M.G.; and Klepper, B.
1972. Root development in relation to soil physical conditions. *In D.I. Hillel (ed.), Optimizing the Soil Physical Environment Toward Greater Crop Yields* pp. 57-77. Acad. Press, New York.
- Taylor, H.M.; and Klepper, B.
1971. Water uptake by cotton roots during an irrigation cycle. *Aust. J. of Biol. Sci.* 24:853-859
- Taylor, H.M., and Klepper, B.
1974. Water relations of cotton. I. Root growth and water use as related to top growth and soil water content. *Agron. J.* 66:584-588
- Taylor, H.M., and Klepper, B.
1975. Water uptake by cotton root systems: An examination of assumptions in the single root model. *Soil Sci.* 120 57-67.
- Taylor, H.M., and Klepper, B.
1978. The role of rooting characteristics in the supply of water to plants. *Advances in Agronomy* 30:99-128.
- Taylor, H.M., and Ratliff, L.F.
1969. Root elongation rates of cotton and peanuts as a function of soil strength and soil water content. *Soil Sci.* 108:113-119.
- Taylor, O.C., and Mersereau, J.D.
1963. Smog damage to cotton. *Calif. Agr.* 2:March 1963.
- Taylor, R. M.
1972. Germination of cotton (*Gossypium Hirsutum* L.) pollen on an artificial medium. *Crop Sci.* 12:243-244
- Taylor, R. M. and Lankford, M.K.
1972. Secondary dormancy in cotton. *Crop Sci.* 12:195-196.

- Taylor, W.K.
1981. DROPP: Thidiazuron experimental cotton defoliant. Proc. Beltwide Cotton Prod. Mech. Conf. pp. 70-71.
- Templeton, G.E.; Meyer, W.L.; Grable, C.I.; and Sigel, C.W.
1967. The chlorosis toxin from *Alternaria tenuis* is a cyclotetrapeptide. *Phytopath.* 57:833.
- Tenhunen, J.D.; Weber, J.A.; Yocum, C.S.; and Gates, D.M.
1979. Solubility of gases and the temperature dependent of whole leaf affinities for carbon dioxide and oxygen. *Plant Physiol.* 63:916-923.
- Tesha, A.J., and Kumar, D.
1978. Effect of fertilizer nitrogen on drought resistance in *Coffea arabica* L. *J. Agric. Sci.* 90:625-631.
- Tharp, W.H.
1961. Getting a stand (Area II.) Blueprint for Cotton Research. Nat. Cotton Coun. America. Dec., 1961 pp. 36
- Tharp, W.H.
1965. The cotton plant. How it grows and why its growth varies. Agric. Handbook No. 178, USDA, ARS.
- Tharp, W.A.
1962. Blueprint for cotton research: Area VII Fruiting Control. National Cotton Council, Memphis, Tenn.
- Tharp, W.H.
1948. Cottonseed composition—relation to variety, maturity, and environment of the plant *In* Cottonseed and cottonseed products. A.E. Bailey (ed.). Interscience, NY. pp. 117-156.
- Tharp, W.H., Thomas, R.O.; Walhood, V.T.; and Carns, H.R.
1961. Effect of cotton defoliation on yield and quality. USDA, Production Research Report 46.
- Tharp, W.H.; Skinner, J.J.; Turner, J.H.; Bledsoe, R P., and Brown, H.B.
1949. Yield and composition of cottonseed as influenced by fertilization and other environmental factors. USDA Tech. Bull. No. 974, pp. 153.
- Thimann, K.
1978. Senescence. *Bot. Mag. Tokyo*, Special Issue. 1 19-43.
- Thomas, J.C.; Brown, K.W.; and Jordan, W.R.
1976. Stomatal response to leaf water potential as affected by preconditioning water stress in the field. *Agron. J.* 68:706-708.
- Thomas, J.D., and Hill, G.R.
1949. Photosynthesis under field conditions. *In* J. Franck and W. Loomis (eds.), Photosynthesis in Plants, pp. 19-52. Iowa State College Press, Ames.
- Thomas, J.F.; Raper, C.D., Jr.; Anderson, C.E.; and Downs, R.J.
1975. Growth of young tobacco plants as affected by carbon dioxide and nutrient variables. *Agron J.* 67.685-689.
- Thomas, J.R.
1980. Osmotic and specific salt effects on growth of cotton. *Agron. J.* 72:407-412.
- Thomas, R.O.
1964. Effect of application and concentration of 2-chloroethyltrimethylammonium chloride on plant size and fruiting response of cotton. *Crop Sci.* 4:403-406.
- Thomas, R.O.
1965. Some effect of boll maturity associated with bottom defoliation timing and with partial crown defoliation. Cotton Def. and Physiol. Conf. pp. 92.
- Thomas, R.O.
1967. Effect of two growth retardants on flowering and boll production of greenhouse cotton plants. Proc. Beltwide Cotton Prod. Res. Conf. pp.222-226.
- Thomas, R.O.
1972. Field comparisons of selected growth retardants. Proc. Beltwide Cotton Prod. Res. Conf. pp. 49.

- Thomas, R.O.
1975 Cotton flowering and fruiting response to application timing of chemical growth retardants. *Crop Sci.* 15:87-90.
- Thomas, R.O.; Cleveland, T.C., and Cathey, G.W.
1979. Chemical plant growth suppressants for reducing late—season cotton bollworm-budworm feeding sites. *Crop Sci.* 19:861-863.
- Thomas, R.O., and Hacskaylo, J.
1973. Cotton response to DPX-1840 growth retardant following root and foliar uptake. *Proc Beltwide Cotton Prod. Res. Conf.* pp. 36.
- Thomas, R.O., and Hacskaylo, J.
1974. Cotton fruiting and yield responses to growth retardants used for suppressing late-season plant development. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 61.
- Thompson, A.C.; Hanny, B.W.; Hedin, P.A.; and Guelöner, R.C.
1971. Phytochemical studies in the family *Malvaceae*. I. Comparison of essential oils of six species by gas-liquid chromatography. *Amer. J. Bot.* 58:803-807.
- Thompson, A.C., Lane, H.C.; Jones, J.W.; and Hesketh, J.D.
1975. Soluble and insoluble sugars in cotton leaves, squares, and bolls. *In Proc. Beltwide Cotton Prod. Conf. New Orleans, La.* pp. 59, 61-63.
- Thorne, D.W., and Peterson, H.B.
1954 *Irrigated soils—their fertility and management.* The Blakiston Co., Inc., New York.
- Thorne, G.N.
1971. Physiological factors limiting the yield of arable crops. Chap. 9. *In P.F. Wareing and J.P. Cooper (eds.), Potential Crop Production. A Case Study,* pp. 143-158. Heinemann Educational Books, London.
- Thorne, J.H., and Koller, H.R.
1974. Influence of assimilate demand on photosynthesis, diffusive resistances, translocation, and carbohydrate levels of soybean leaves. *Plant Physiol.* 54:201-207.
- Tibbitts, T.W., and Krizek, D.T.
1978. Carbon dioxide. Chap. 4. *In R.W. Langhans (ed.), A Growth Chamber Manual: Environmental Control for Plants,* pp. 80-100. Cornell University Press, Ithaca, New York.
- Ting, I.P., and Dugger, W.M., Jr.
1968. Factors affecting ozone sensitivity and susceptibility of cotton plants. *J. Air Poll. Contr. Assoc.* 18:810-813.
- Tinus, R.W.
1972. CO₂ enriched atmosphere speeds growth of ponderosa pine and blue spruce seedlings. *Tree Plant. Notes* 23:12-15.
- Tinus, R.W.
1974. Impact of the CO₂ requirement on plant water use. *Agric. Meteorol.* 14:99-112.
- Tobin, A.J.
1979. Evaluating the contribution of post transcriptional processing to differential gene expression. *Dev. Biol.* 68:47-58.
- Tognoni, F.; Halevy, A.H.; and Wittwer, S.H.
1967. Growth of bean and tomato plants as affected by root absorbed growth substances and atmospheric carbon dioxide. *Planta* 72:43-52.
- Tognoni, F.; Halevy, A.H.; and Wittwer, S.H.
1967. Growth of bean and tomato plants as affected by root absorbed growth substances and atmospheric carbon dioxide. *Planta* 72:43-52.
- Tolbert, N.E.
1973. Glycolate biosynthesis. *In B.L. Horecker, and E.R. Stadtman (eds.), Curr. Top. Cell Regul* 7:21-50.
- Tolbert, N.E.
1980. Photorespiration. *In P.K. Stumpf and E.E. Conn (eds.), The Biochemistry of Plants, Vol. 2,* pp. 487-523.

Tolbert, N.L., and Zelitch, I.

1982. Carbon metabolism. *In* Proceedings of an International Conference on Rising Atmospheric Carbon Dioxide and Plant Productivity, Athens, Georgia, May 23-28, 1982. American Association for the Advancement of Science, Washington, D.C.

Tollervey, F.E.

1970. Physiology of the cotton plant. *Cotton Grow. Rev.* 47:245-256.

Tomar, D.P.; Mehra, R.B.; Shukla, D.S.; and Singh, S.P.

1965. Photoperiodic study on cotton. *Indian Cotton J.* 19:378-384.

Toole, E.H., and Drummond, P.L.

1924. The germination of cotton seed. *J. Agr. Res.* 28 285-292.

Toole, E.H., and Toole, V.K.

1951. Injury to seed beans during threshing and processing. USDA. Circular No. 874.

Torrey, J.G.

1976. Root hormones and plant growth. *Ann. Rev. Plant Physiol.* 27:435-459.

Touma-Touchan, H.

1977. Etudes biochimiques et ultrastructurales des lipides dans la graine du cotonnier. *J. Ultrastruct. Res.* 58:271-288.

Towers, B., and Harrison, G.J.

1949. Viability tests of cotton seed. California Dept. of Agriculture. *The Bulletin* 38:25-31.

Trebst, A., and Avron, M.

1977. *Photosynthesis I: Photosynthetic Electron Transport and Photophosphorylation.* Springer-Verlag, Berlin.

Trcharnc, K.J.

1982. Hormonal control of photosynthate and assimilate distribution. *In* J.S. McLaren (ed.), *Chemical Manipulation of Crop Growth and Development*, pp. 55-66 Butterworth's, London

Trelease, R.N., Miernyk, J.A.; Choinski, J.S., Jr.; and Bortman, S.J.

1980. Enzyme synthesis in developing cotton embryos. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 355-366

Trewavas, A.J.

1981. How do plant growth substances work? *Plant, Cell, and Env.* 4:203-228.

Tripp, V.W.; Moore, A.T.; and Rollins, M.L.

1951. Some observations on the constitution of the primary wall of the cotton fiber. *Text. Res. Journ.* 21:886-894

Troughton, J.H.

1969. Plant water status and carbon dioxide exchange of cotton leaves. *Aust. J. Biol. Sci.* 22:289-302.

Troughton, J.H.

1975. Photosynthetic mechanisms in higher plants. Chap. 16. *In* J.B. Cooper (ed.), *Photosynthesis and Productivity in Different Environments.* IBP 3, pp. 357-391. Cambridge University Press, Cambridge.

Troughton, J.H., and Slatyer, R.O.

1969. Plant water status, leaf temperature, and the calculated mesophyll resistance to carbon dioxide of cotton leaves. *Aust. J. Biol. Sci.* 22:815-827.

Tsui, C.

1948. The role of zinc in auxin synthesis in the tomato plant. *Amer. J. Bot.* 35:172-179.

Tucker, T.C., and Tucker, B.B.

1968. Nitrogen nutrition. *In* F.C. Elliot, M. Hoover, and W.K. Porter, Jr. (eds.), *Advances in Production and Utilization of Quality Cotton: Principles and Practices*, pp. 183-211. Iowa State University Press, Ames, Iowa.

Tugwell, N.P., and Waddle, B.A.

1964. Yield and lint quality of cotton as affected by varied production practices. *Arkansas Arg. Exp. Sta., Bull.* 682.

- Tuchibaev, M., and Kruzhiln, A.S.
1965 Translocation of labeled assimilates from individual cotton leaves. *Soviet Plant Physiol.* 12:918-922.
- Tupper, G.R.
1969. Physical characteristics of cottonseed related to seedling vigor and design parameters for seed selection. Ph.D. Dissertation. Texas A&M University, College Station, TX. pp. 159.
- Tupper, G.R., Clark, L.E.; and Kunze, O.R.
1970 The measurement of certain physical characteristics related to rapid germination and seedling vigor in cottonseed. *Proc. Assoc. of Off. Seed Anal.* 60:138-148
- Tupper, G.R., Kunze, O.R.; and Wilkes, L.H.
1971. Physical characteristics of cottonseed related to seedling vigor and design parameters for seed selection. *Trans. of the ASAE* 14:890-893.
- Turner, A.J.
1929. Cotton seeds. Their absorption of water and specific gravity. *The Ag. J. of India.* 24:83-90.
- Turner, J.H., and Ferguson, D.
1972. Field performance of cotton grown from filled and partially filled seeds. *Crop Sci.* 12:868-871.
- Turner, J.H.; Ramey, H.H.; and Worley, S.
1976a. Influence of environment on seed quality of four cotton cultivars. *Crop Sci.* 16:407-409.
- Turner, J.H.; Ramey, H.H.; and Worley, S.
1976b. Relationship of yield, seed quality, and fiber properties in upland cotton. *Crop Sci.* 16:578-580.
- Turner, J.H.; Stewart, J. McD.; Hoskinson, P.E.; and Ramey, H.H.
1977. Seed setting efficiency in eight cultivars of upland cotton. *Crop Sci.* 17:769-772.
- Turner, J.H., Jr.; Worley, S., Jr.; Ramey, H.H. Jr.; Hoskinson, P.E., and Stewart, J. McD.
1979 Relationship of week of flowering and parameters of boll yield in cotton. *Agron. J.* 71:248-251
- Turner, N.C.
1969 Stomatal resistance to transpiration in three contrasting canopies. *Crop Sci.* 9:300-307
- Turner, N.C.
1974 Stomatal response to light and water under field conditions. *In Mechanisms of Regulation of Plant Growth*, Royal Soc. N.Z. Bull. No. 12.
- Turner, N.C.
1979. Drought resistance and adaptation to water deficits in crop plants. *In H. Mussell and R.C. Staples (eds.), Stress Physiology in Crop Plants*, pp. 343-372. John Wiley and Sons, New York.
- Turner, N.C., and Kramer, P.J.
1980 *Adaptation of Plants to Water and High Temperature Stress*. Wiley Interscience, NY.
- Turner, T.W.
1922. Studies of the mechanism of the Physiological effect of certain mineral salts in altering the ratio of top growth to root growth in seed plants. *Amer. J. Bot.* 9:415-445.
- Turner, W.B., and Bidwell, R.G.S.
1965. Rates of photosynthesis in attached and detached bean leaves, and the effect of spraying with indoleacetic acid solution. *Plant Physiol.* 40:446-451.

U

- Unsworth, M.H.
1981. Air pollution and plant productivity. *In C.B. Johnson (ed.), Physiological Processes Limiting Plant Productivity*, pp. 293-306. Butterworth's, London.

- Unsworth, M.H.; Biscoe, P.V.; and Black, V.J.
1976. Analysis of gas exchange between plants and polluted atmospheres. *In* T.A. Mansfield (ed.), *Effect of Air Pollutants on Plants*, pp. 6-16. Cambridge University Press, Cambridge.
- Unsworth, M.H., and Black, V.J.
1981. Stomatal responses to pollutants. *In* P.E. Jarvis and T.A. Mansfield (eds.), *Stomatal Physiology*, pp. 187-203. Cambridge University Press, Cambridge.
- Upmeyer, D.J., and Küller, H.R.
1973. Diurnal trends in net photosynthetic rate and carbohydrate levels of soybean leaves. *Plant Physiol.* 51:871-874.
- USDA, Bureau of Plant Industry, Beltsville, MD.
1947. *Better Cottons*. pp. 928-945.
- USDA Southern Cooperative Series.
1965. *Mechanized harvesting of cotton*. Bulletin No. 100 USDA ARS, U.S. Government Printing Office, Washington, D.C.
- U.S. Salinity Laboratory Staff.
1954. *Diagnosis and improvement of saline and alkali soils*. USDA Handbook 60.

V

- Vaadia, Y.
1976. Plant hormones and water stress. *Phil. Trans. R. Soc. London B.* 273:513-522.
- van Bavel, C.H.M.
1972a. Water use efficiency in plant growth and ambient carbon dioxide level. Tech. Rep. No. 42. Texas Water Resources Institute, Texas A&M University. pp. 115, pp. 1-38.
- van Bavel, C.H.M.
1972b. Toward realistic simulation of the natural plant climate. *In* *Plant Response to Climatic Factors*, pp. 441-446. Proc. Uppsala Sympos., UNESCO.
- van Bavel, C.H.M.
1974. Antitranspirant action of carbon dioxide on intact sorghum plants. *Crop Sci.* 14:208-212
- van Bavel, C.H.M.; Demichele, D.W.; and Ahmed, J.
1973. A model of gas and energy exchange regulation by stomatal action in plant leaves. *Texas Agr. Exp. Sta. Misc. Publ.* 1078.
- van den Honert, T.H.
1930. Carbon dioxide assimilation and limiting factors. *Rec. Trav. Bot. Neerlandais* 27:149-286.
- Valdovinos, J.G., and Ernest, L.C.
1967. Effect of protein synthesis inhibitors, auxin, and gibberellic acid on abscission. *Physiol. Plant* 20:1027-1038.
- Vanderhoef, L.N., and Dute, R.R.
1981. Auxin regulated wall loosening and sustained growth in elongation. *Plant Physiol.* 67:146-149.
- Vanderhoef, L.N., and Stahl, C.A.
1975. Separation of two responses to auxin by means of cytokinin inhibition. *Proc. Nat'l. Acad. Sci. USA* 72:1822-1825.
- Vanderhoef, L.N., Stahl, C.; Siegel, N.R.; and Zeigler, R.
1973. The inhibition by cytokinin of auxin-promoted elongation in excised soybean hypocotyl. *Physiol. Plant* 29:22-27.
- Varma, S.K.
1976a. Reversal of abscisic acid promoted abscission of flower buds and bolls of cotton (*Gossypium hirsutum* L.) and its reversal with other plant regulators. *Biol. Plant.* 18:421-428.
- Varma, S.K.
1976c. Role of gibberellic acid in the phenomena of abscission in flower buds and bolls of cotton (*Gossypium hirsutum* L.) *Indian J. Plant Physiol.* 19:40-46.

- Varma, S.K.
1976d. Effect of localized application of ascorbic acid and other plant regulators singly and in combination with abscisic acid on boll shedding in cotton (*Gossypium hirsutum* L.). *Indian J. Exp. Biol.* 14:305-308
- Varma, S.K.
1978. Variations in the endogenous growth regulators and nitrogen content in retained and abscising bolls of cotton. *Indian J. Plant Physiol.* 21:18-23.
- Vasil, I.K.
1958. The cultivation of excised anthers and the culture and storage of pollen. Ph.D. Dissertation. University of Delhi, Delhi, India.
- Vaughan, A.K.F., and Bate, G.C.
1977. Changes in the levels of ethylene, abscisic-acid like substances and total non-structural carbohydrate in young cotton bolls in relation to abscission induced by a dark period. *Rhod. J. Agr. Res.* 15:51-63.
- Veech, J.A.
1978. An apparent relationship between methoxy-substituted terpenoid aldehydes and the resistance of cotton to *Meloidogyne incognita*. *Nematologica* 24:81-87.
- Veech, J.A.
1979. Histochemical localization and nematotoxicity of terpenoid aldehydes in cotton. *J. Nematol.* 11:240-246.
- Veech, J.A.; Stupanovic, R.D., and Bell, A.A.
1976. Peroxidative conversion of hemigossypol to gossypol. A revised structure for isohemigossypol. *J.C.S. Chem. Comm.*, pp. 144-145.
- Veksler, N.S.; Smirnova, L.S.; and Abduazimov, K.A.
1977. Changes in the structural elements of cotton lignins in the different periods of vegetation. *Khim. Prir. Soedin. (Tashk)* pp. 100-107
- Veksler, N.A.; Smirnova, L.S.; and Abduazimov, K.A.
1978. Isolation and study of individual dioxane lignin fractions from cotton stems. *Khim. Prir. Soedin. (Tashk)*. 122-125.
- Velthuys, B.R.
1980. Mechanisms of electron flow in photosystem II and toward photosystem I. *Ann. Rev. Plant Physiol.* 31:545-567
- Vencro, R.J.
1980. Role of peroxidase in cotton resistant to bacterial blight. *Plant Sci. Lett.* 20:47-56.
- Verhalen, L.M., and Murray, J.C.
1970. Genotype by environment interaction study of cotton in Oklahoma. *Proc. Beltwide Cotton Prod. Res. Conf., Nat'l. Cotton Coun., Memphis, TN.* pp. 52-54.
- Verhalen, L.M.; Mamaghani, R.; Morrison, W.C., and McNew, R.W.
1975. Effect of blooming data on boll retention and fiber properties in cotton. *Crop Sci.* 15:47-52.
- Vernon, L.P., and Seely, G.R.
1966. *The Chlorophylls*. Acad. Press, NY.
- Vick, B.A., and Zimmerman, D.C.
1981. Lipoxygenase, hydroperoxide isomerase, and hydroperoxide cyclase in young cotton seedlings. *Plant Physiol.* 67:92-97.
- Vieira da Silva, J.B.
1976. Water stress, ultrastructure and enzymatic activity. In O.L. Lange, L. Kappen, and E.D. Schulze (eds.), *Water and Plant Life, Ecological Studies*, Vol. 19, pp. 207-224. Springer-Verlag
- Vieira da Silva, J.B.
1973. Influence de la secheresse sur la photosynthese et la croissance du Cotonnier. (Influence of drought on the photosynthesis and growth of the cotton plant) *Reponse des Plantes aux Facteurs Climatiques, Actes Coll. Uppsala, 1970 (Ecologie et Conservation, 5.)*, pp. 213-220. UNESCO, New York

- Vieira da Silva, J.B.; Naylor, A.W.; and Kramer, P.J.
1974. Some ultrastructural and enzymatic effects of water stress in cotton (*Gossypium hirsutum* L.) leaves. Proc. Nat. Acad. Sci. USA 71:3243-3247.
- Vimes, H.M., Grierson, W., and Edwards, G.J.
1968. Respiration, internal atmosphere and ethylene evolution of citrus fruit. Proc. Amer. Soc. Hort Sci. 92:227
- Vincke, H.; DeLanghe, E.; Franssen, T.; and Verschraege, L.
1985. Cotton Fibers are Uniform in Length Under Natural Conditions In: International Institute of Cotton. Cotton Fibres: Their Development and Properties. pp. 2-4. International Institute for Cotton, Manchester, UK.
- Vix, H.L.E., Spadaro, J.J.; Murphey, C.H.; Persell, R.M.; Pollard, E.F.; and Gastrock, E.A.
1949. Pilot-plant fractionation of cottonseed. II. Differential settling. J. Amer. Oil Chem. Soc. 26:526-530.
- Vlasova, N.A.
1971. Interaction between nucleus and cytoplasm in the ontogenesis of epidermal and fibrillar cells of cotton ovules. Ontogenez. 2:88-99.
- Vreugdenhil, D.; Burgers, A.; Harkes, P.A.A.; and Libbenga, K.R.
1981. Modulation of the number of membrane-bound auxinbinding sites during the growth of batch-cultured tobacco cells. Planta 152:415-419.

W

- Waddington, J.
1971. Observation of plant roots 'in situ'. Can. J. Bot. 49:1850-1852.
- Waddle, B.M.
1954. The inheritance of photoperiodic response in short day X day neutral cotton hybrids. Ph.D. Dissertation, Texas A&M College, College Station.
- Waddle, B.M.; Lewis, C.R.; and Richmond, T.R.
1961. The genetics of flowering response in cotton. III. Fruiting behavior of *Gossypium hirsutum* race *latifolium* in a cross with a variety of cultivated American Upland Cotton. Genetics. 46:427-437.
- Wadleigh, C.H.
1944. Growth status of the cotton plant as influenced by the supply of nitrogen. Arkansas Agr. Exp. Sta., Bull. 446.
- Wadleigh, C.H.
1968. Wastes in relation to agriculture and forestry. USDA Misc. Pub. 1065.
- Wadleigh, C.H., and Gauch, H.G.
1948. Rate of leaf elongation as affected by the intensity of the total soil moisture stress. Plant Physiol. 23:485-495.
- Waggoner, P.E.
1969. Environmental manipulation for higher yields. Chap. 15. In J.D. Eastin, F.A. Haskins, C.Y. Sullivan, and C.H.M. van Bavel (eds), Physiological Aspects of Crop Yield. pp. 343-373. Amer. Soc. Agron. and Crop Sci. Soc., Madison, Wisconsin.
- Wainwright, I.M.; Palmer, R.L.; and Dugger, W.M.
1980. Pyrimidine pathway in boron-deficient cotton fiber, Plant Physiol. 65:893-896.
- Waiss, A.C., Jr.; Chan, B.G.; Elliger, C.A.; and Binder, R.G.
1981. Biologically active cotton constituents and their significance in HPR. Proc. Beltwide Cotton Prod. Res. Conf. pp. 61-63.
- Wakeham, H.
1955. Cotton fiber length distribution. An important factor. Text. Res. Journ. 24:422-429.
- Wakelyn, P.J.
1975. Amino-acid composition of total protein of cotton. Text. Res. Journ. 45 419-420.

- Wakelyn, P.J.; Stipanovic, R.D., and Bell, A.A.
1974. Identification of scopoletin in dried bract of the cotton plant. *J. Agric. Food Chem.* 22:567-568.
- Walbot, V., and Dure, L.S., III
1976. Developmental biochemistry of cottonseed embryogenesis and germination VII Characterization of the cotton genome. *J. Mol. Biol.* 101:503-536.
- Walbot, V.; Harris, B., and Dure, L.S., III
1975. The regulation of enzyme synthesis in the embryo-germination and germination of cotton. *In C. Markert (ed.), The Developmental Biology of Reproduction (33rd Symp Soc Dev. Biol.)*, pp 165-187. Acad. Press, NY
- Walhood, V.T
1956. A method of reducing the hard seed problem in cotton. *Agron. J.* 48:141-142
- Walhood, V.T.
1957. The effect of gibberellins on boll retention and cutout in cotton. *Proc. 12th Cotton Defoliation-Physiol. Conf.*, pp 24-30
- Walhood, V.T
1958. Effect of gibberellins on yield and growth of cotton. *Proc. 13th Cotton Defoliation-Physiol Conf.*, pp. 27-30.
- Walhood, V.T., and Addicott, F.T.
1968. Harvest-aid programs: Principles and practices. *In F.C. Elliot, M. Hoover, and W.K. Porter, Jr (eds.), Advances in Production and Utilization of Quality Cotton. Principles and Practices*, pp. 407-431. Iowa State University Press, Ames.
- Walhood, V.T., and Counts, B.
1955. Boll, fiber and seed properties of early and late season bolls. *Proc. 10th Ann Beltwide Cotton Defol. Conf* pp. 51-53.
- Walhood, V.T., and McMeans, J.L.
1964. Seed number as a factor in fruit retention in cotton. *Proc. 18th Ann. Beltwide Cotton Defol Physiol Conf* pp. 30-33
- Walker, D.A.
1976. Regulatory mechanisms in photosynthetic carbon metabolism. *In B.L. Horecker and E.R. Stadtman (eds.), Current Topics in Cellular Regulation, Vol. II*, pp 203-241. Acad. Press, NY.
- Walker, J.R.L.
1975. *The Biology of Plant Phenolics*. E. Arnold (Publishers), London
- Wall, J.H.; Muller, L.L.; and Berni, R.J.
1980a. Quantization of lacinilene C 7-methyl ether in cotton dust. *Proc. Fourth Cotton Dust Research Conf.* pp. 58-61.
- Wall, J.H.; Muller, L.L., and Berni, R.J.
1980b. Determination of lacinilene C 7-methyl ether by high performance liquid chromatography. *J. Liq. Chromatography* 4 561-572
- Wallace, R.W.
1976. Isolation and partial characterization of the acaln A and B fractions of cottonseed globulins. *Dissertation. Texas A&M University, College Station, Texas.*
- Wallace, R.W., and Dieckert, J.W.
1976. Isolation of coconut storage proteins by polyacrylamide gel electrophoresis. *Anal. Biochem* 75:498-508.
- Wallace, R.W.; Yu, P.H.; Dieckert, J.P., and Dieckert, J.W.
1974. Visualization of protein-SDS complexes in polyacrylamide gels by chilling. *Anal. Biochem.* 61:86-92.
- Wallach, D.; Marani, A.; and Kletter, E
1978. The relation of cotton crop growth and development to final yield. *Field Crops Res* 1:283-294.

- Waller, D.P.; Zaneveld, L.J.D.; and Fong, H.H.S.
1980. *In vitro* spermicidal activity of gossypol. *Contraception* 22: 183-188.
- Walter, H.; Gausman, H.W.; Rittig, F.R.; Namken, L.N.; Escobar, D.E., and Rodriguez, R.R.
1980. Effect of mepiquat chloride on cotton plant leaf and canopy structure and dry weights of its components. *Proc. Beltwide Prod. Res. Conf.*, pp. 32-35.
- Walters, L.G., and Dure, L.S.
1966. Ribonucleic acid synthesis in germinating cotton seeds. *J. Mol. Biol.* 19:1-27.
- Walton, D.C.
1977. Abscisic acid and seed germination. *In* A.A. Khan (ed.), *The Physiology and Biochemistry of Seed Dormancy and Germination*, pp. 145-178. Elsevier/North-Holland Press.
- Walton, D.C.
1980/81 Does ABA play a role in seed germination? *Isr. J. Bot.* 29:168-180.
- Walton, D.C.; Galson, E.; and Harrison, M.A.
1977. The relationship between stomatal resistance and abscisic acid levels in leaves of water stressed bean plants. *Planta* 133:145-148.
- Walton, J., and Ray, P.M.
1981. Receptor function of auxin binding sites in maize. *Plant Physiol.* 68:1334-1338.
- Wang, S.C., and Pinckard, J.A.
1973. Cotton boll cuticle, a potential factor in boll rot resistance. *Phytopath.* 63:315-319.
- Wanjura, D.F.
1982. Reduced cotton productivity from delayed emergence. *Trans. ASAE* 25:1536-1539.
- Wanjura, D.F., and Buxton, D.R.
1971. A model for simulating cotton seedling emergence. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 78-79.
- Wanjura, D.F., and Buxton, D.R.
1972a. Water uptake and radicle emergence of cottonseed as affected by soil moisture and temperature. *Agron. J.* 64:427-431.
- Wanjura, D.F., and Buxton, D.R.
1972b. Hypocotyl and radicle elongation of cotton as affected by soil environment. *Agron. J.* 64:431-434.
- Wanjura, D.F.; Hudspeth, E.B., Jr.; and Bilbro, J.D., Jr.
1969. Emergence time, seed quality, and planting depth effects on yield and survival of cotton (*Gossypium hirsutum* L.). *Agron. J.* 61:63-65.
- Wanjura, D.F., and Minton, E.B.
1974. Evaluation of cottonseed hydration-chilling treatments for improving seedling emergence. *Agron. J.* 66:217-220.
- Wanjura, D.F., and Minton, E.B.
1981. Delayed emergence and temperature influences on cotton seedling vigor. *Agron. J.* 73:594-597.
- Wardel, W.L., and Skoog, F.
1969. Flower formation in excised tobacco stem segments: I. Methodology and effect of plant hormones. *Plant Physiol.* 44:1402-1406.
- Wardlaw, I.F.
1968. The control and pattern of movement of carbohydrate in plants. *Bot. Rev.* 34:79-105.
- Wardlaw, I.F.
1980. Translocation and source-sink relationships pp. 297-339. *In* P.S. Carlson (ed.), *The biology of crop productivity*. Acad. Press, New York, NY.
- Wardlaw, I.F., and Moncur, L.
1976. Source, sink, and hormonal control of translocation in wheat. *Planta* 128:93-100.
- Ware, J.O.
1931. Selection of cotton plants for protein and oil content. *Ark. Agr. Exp. Sta. Bull.* 268. pp. 34-35.

- Wareing, P.F., and Patrick, J.
1975 Source-sink relations and the partition of assimilates in the plant *In* J.P. Cooper (ed.), *Photosynthesis and Productivity in Different Environments*, pp 481-494 Cambridge University Press, London.
- Wareing, P.F.; Khalifa, M.M.; and Treharne, K.J.
1968. Rate-limiting process in photosynthesis at saturating light intensities *Nature* 220:453-457.
- Warwicker, J.O., Jeffriss, R., Colbran, A.L., and Robinson, R.N.
1966. A review of the literature as the effect of caustic soda and other swelling agents on the fine structure of cotton. Shirley Institute Pamphlet, nr 93.9-54.
- Waterkeyn, L.
1974. Analyse des divers facteurs conditionnant la résistance mécanique des poils végétaux. Etude des structures membranaires et des moyens d'intervention permettant de les modifier en vue d'une amélioration des propriétés technologiques Rapport final de l'étude F.R.F.C., nr 702.
- Waterkeyn, L.
1981. Cytochemical localization and function of β , 3-glucan callose in the developing cotton fiber cell wall *Protoplasma*. 106:49-67.
- Waterkeyn, L.
1985. Light Microscopy of the Cotton Fibre. In: International Institute of Cotton. *Cotton Fibres: Their Development and Properties*. pp. 17-20. International Institute for Cotton, Manchester, UK.
- Waterkeyn, L., De Langhe, E.; and Eid, A.A.H.
1975. *In vitro* culture of fertilized cotton ovules. II. Growth and differentiation of cotton fiber. *La Cellul*, 71 41-51
- Watson, D.J.
1952. The physiological basis of variation in yield. *Adv. Agron.* 4:101-145
- Watson, H., and Helmer, J.D.
1964 Cottonseed quality as affected by ginning process—a progress report. USDA, ARS 42-107. Dec. 1964
- Watson, M.W., and Berlin, J.D.
1973. Differentiation of lint and fuzz fibers on the cotton ovule. *J. Cell Biol.* 59 360a.
- Wauford, S.H.
1979. *In vitro* germination of upland cotton pollen: An analysis of parameters affecting germination and tube length M.S. Thesis University of Tennessee, Knoxville, TN.
- Weaver, J.E.; Jean, F.C.; and Crist, J.W.
1972. Development and activities of roots of crop plants. Carnegie Inst. Wash. Pub. No. 316.
- Webb, J.C.; Stone, R.B., Jr.; and McDow, J.J.
1966. Response of cottonseed to audiofrequency gas plasma. *Trans. of the ASAE* 9 872-874, 879.
- Webb, J.C.; Stone, R.B., Jr.; and Pate, J.B.
1964. Results of laboratory and field tests of gas plasma irradiated cottonseed. *Trans. of the ASAE* 7:412-417
- Webber, H.J., and Boykin, E.B.
1907. The advantage of planting heavy cotton seed *USDA Farmer's Bulletin* 285. pp. 16
- Webster, B.D.
1973. Anatomical and histochemical changes in leaf abscission. *In* *Shedding of Plant Parts*, T.T. Kozlowski (ed.), pp. 45-83. Acad. Press, New York and London.
- Weintraub, I.A., and Tuen, N.T.
1971 On the quarternary structure of the vetch seed legumin (In Russian) *Molekulyarnaya Biologiya* 5:59-68.
- Weir, H.L.
1959. Germination of cottonseed (*Gossypium hirsutum* L.). *Proc. Assoc. Off. Seed Anal.* 49:77-79.
- Went, F.W., and Carter, M.
1948. Growth response of tomato plants to applied sucrose. *Amer. J. Bot.* 35:95-106.

- West, N.E., and Klemmedson, J.O.
1978. Structural distribution of nitrogen in desert ecosystems. In N.E. West and J. Skujins (eds.), Nitrogen in Desert Ecosystems, pp. 1-16. Dowden, Hutchinson, and Ross, Stroudsburg, Pennsylvania.
- Westafer, J.M., and Brown, R.M., Jr.
1976. Electron microscopy of the cotton fibre. New observations on cell wall formation. *Cytobios* 15:111-138.
- Weaver, J.B.
1958. Embryological studies following interspecific crosses in *Gossypium* II. *G. arboreum* x *G. hirsutum*. *Amer. J. Bot.* 45:10-16.
- White, A.B., Jr.
1958. Fat utilization and composition in germinating cottonseed. *Plant Physiol.* 33:218-226.
- Whiteman, P.C., and Köller, D.
1967. Interactions of carbon dioxide concentration, light intensity and temperature on plant resistances to water vapour and carbon dioxide diffusion. *New Phytol.* 66:463-473.
- Whitney, J.B.
1941. Effects of the composition of the soil atmosphere on the absorption of water by plants. *Amer. J. Bot.* 28:14
- Widholm, J.M., and Ogren, W.L.
1969. Photorespiratory-induced senescence of plants under conditions of low carbon dioxide. *Proc. Nat. Acad. Sci. USA* 63:668-675.
- Widmaier, R.; Howe, J.; and Heinstein, P.
1980. Prenyltransferase from *Gossypium hirsutum*. *Arch. Biochem. and Biophys.* 200:609-616.
- Wiese, M.V., and DeVay, J.E.
1970. Growth regulator changes in cotton associated with defoliation caused by *Verticillium albo-atrum*. *Plant Physiol.* 45:304-309.
- Wiles, A.B.
1959. Beneficial effects of calcium on cotton seedlings. *Miss. Agr. Exp. Sta. Info. Sheet* 637.
- Wiles, A.B.
1960. Low vigor seed may cause poor stand of cotton. *Miss. Farm. Res.* 23:1.
- Wiles, A.B., and Presley, J.T.
1960. Seed deterioration as a factor in nub-root production in cotton. *Plant Dis. Repr.* 44:472-473.
- Wilkes, L.H.
1969. Physical properties of seed and environmental factors affecting emergence. *Proc. Beltwide Cotton Prod. Mech. Conf.* pp. 15-16.
- Wilkes, L.H.
1970. What is quality--as it relates to planted seed? *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 90-93
- Wilkes, L.H.
1978. Seed cotton storage: Effects on seed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 215-217.
- Wilkes, L.H.; Jones, R.; Underbrink, G.; and Alden, W.H.
1972. Design and development of a seed cotton handling and storage system. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 73.
- Wilkes, L.H.; Kunze, O.R.; and Niles, G.A.
1968. Field emergence of cotton as affected by seed density, *Texas Agr. Exp. Sta. Pro. Rpt.* 2508.
- Wilkes, L.H., and Sorenson
1973. Effect of field storage and handling on seed and lint quality. *Sum. Proc. West. Cotton Prod. Conf.* pp. 50-52
- Williams, C.B.
1906. The cotton plant. *The Bulletin, North Carolina State Board of Agric.* Vol. 27.

- Williams, J.
1978. Carbon Dioxide, Climate and Society. Proceedings of a IIASA Workshop Cosponsored by WMO, UNEP, and SCOPE, February 21-24, 1978 Pergamon Press, New York pp 332
- Williams, J.L.; Ingram, P., Peterlin, A.; and Woods, D.K.
1974 Never-dried cotton fibers: Part II: Fixation on the never-dried state. *Text Res. Journ.* 44:370-377.
- Williamson, C.E., and Dimmock, A.W.
1953. Ethylene from diseased plants. *USDA Yearbook Agr.* pp. 881-886.
- Willison, J H M.
1978. Cell wall biosynthesis in the cotton fiber; in 176th ACS National Meeting Cellulose, Paper and Textile Chemistry Division American Chemical Society
- Willison, J H.M., and Brown, R M., Jr.
1977 An examination of the developing cotton fiber: Wall and plasmalemma. *Protoplasma* 92:21-44
- Willison, J.H.M., and Brown, R.M , Jr.
1978 A model for the Pattern of deposition of microfibrils in the Cell wall of Glaucocysts. *Planta*, 141:51-58.
- Wilson, J.T., Katterman, F.R.H., and Endrizzi.
1976. Analysis of repetitive DNA in three species of *Gossypium*. *Biochem. Genet* 14:1 1071-1075
- Wilson, F.D., and Lee, J A.
1971. Genetic relationship between tobacco budworm feeding response and gland number in cotton seedlings. *Crop Sci.* 11:419-421.
- Wilson, F.D., and Smith, J N.
1977 Variable expressivity and gene action of gland-determining alleles in *Gossypium hirsutum* L. *Crop Sci.* 17:539-543.
- Wit, C.T de.
1958. Transpiration and crop yields. *Agr. Res Rep. Wageningen* 64:1-88.
- Wit, C T de
1978. Simulation of Assimilation, Respiration, and Transpiration of Crops Halsted Press, New York.
- Witt, H T
1975. Primary acts of energy conservation in the functional membrane of photosynthesis. *In* Govindjee (ed.), *Bioenergetic of Photosynthesis* pp. 493-554 Acad Press, NY
- Wittenbach, V.A., and Bukovac, M.J.
1973. Cherry fruit abscission: Effect of growth substances, metabolic inhibitors and environmental factors. *J Amer. Soc. Hort Sci.* 98:348-351
- Wittwer, S H
1970a. Aspects of CO₂ enrichment for crop production. *Trans. Ameri. Soc Agr Eng.* 13:249-251.
- Wittwer, S.H.
1970b Fertilizing with CO₂. *Crops and Soils* 23:10-12.
- Wittwer, S.H.
1978a Carbon Dioxide fertilization of crop plants. Chap. 9. *In* U.S. Gupta (ed), *Crop Physiology*, pp. 310-333, Oxford and IBH Pub. Co., New Delhi, India
- Wittwer, S.H.
1978b. Production potential of crop plants. *In* U.S. Gupta (ed), *Crop Physiology*. pp. 334-373, Oxford and IBH Pub. Co., New Delhi, India.
- Wittwer, S.H.
1980. Carbon dioxide and climate change. An agricultural perspective. *J Soil Water Conserv* 35:116-120.
- Wittwer, S H
1981. Advances in protected environments for plant growth *In* J. Manassah and E.J. Briskey (eds.), *Advances in Food Production Systems for Arid and Semi-Arid Lands*, pp. 679-715 Acad. Press, New York

- Wittwer, S.H.
1982a. Agricultural adaptation to the rising level of atmospheric carbon dioxide. *In* W.C. Clark (ed.), *Carbon Dioxide Review*, pp. 320-324. Oxford University Press, New York.
- Wittwer, S.H.
1982b. Carbon Dioxide and crop productivity. *New Scientist* 95:233-234.
- Wittwer, S.H.
1983. Rising atmospheric carbon dioxide and crop productivity. *HortSci.* 16:667-673.
- Wittwer, S.H., and Robb, W.M.
1964. Carbon dioxide enrichment of greenhouse atmospheres for food crop production. *Econ. Bot* 18:34-56.
- Wold, B.J.; Klein, W.H.; Hough-Evans, B.R.; Britten, R.J.; and Davidson, E.H.
1978. Sea urchin embryo mRNA sequences expressed in the nuclear RNA of adult tissues. *Cell* 14:941-950.
- Wolf, W.J., and Briggs, D.R.
1959. Purification and characterization of the 11S component of soybean proteins. *Arch. Biochem. Biophys.* 85:186-199.
- Wolfenbarger, D.A., and Davis, J.W.
1976. Termination of cotton plants with chemicals and the effect on populations of boll weevils and tobacco budworms. *Proc. Beltwide Cotton Prod. Res. Conf.* pp. 46-48.
- Wong, J.R., and Sussex, I.M.
1980a. Isolation of abscisic acid-resistant variants from tobacco cell cultures I. Physiological bases for selection. *Planta* 148:97-102.
- Wong, J.R., and Sussex, I.M.
1980b. Isolation of abscisic acid-resistant variants from tobacco cell cultures. II Selection and characterization of variants. *Planta* 148:103-107.
- Wong, S.C.
1979. Elevated atmospheric partial pressure of CO₂ and plant growth. I. Interactions of nitrogen nutrition and photosynthetic capacity in C₃ and C₄ plants. *Oecologia* 44:68-74.
- Wong, S.C.
1980. Effects of elevated partial pressure of CO₂ on rate of CO₂ assimilation and water use efficiency in plants. *In* G.I. Pearman (ed), *Carbon Dioxide and Climate: Australian Research*, pp. 159-166. Australian Academy of Science, Canberra, Australia.
- Wong, S.C.; Cowan, I.R.; and Farquhar, G.D.
1979. Stomatal conductance correlates with photosynthetic capacity. *Nature* 282:424-426.
- Woo, K.C., and Osmond, C.B.
1976. Glycine decarboxylation in mitochondria isolated from spinach leaves. *Aust. J. Plant Physiol.* 3:771-785.
- Woo, K.C., and Wong, S.C.
1983. Inhibition of CO₂ assimilation by supraoptimal CO₂: Effect of light and temperature. *Aust. J. Plant Physiol.* 19:75-85.
- Woodruff, J.M.; McCain, F.S.; and Hoveland, C.S.
1967. Influence of relative humidity, temperature and light during boll maturation on cottonseed quality. *Proc. Beltwide Cotton Prod. Res. Conf.* 1967:206.
- Woodstock, L.W.
1973. Physiological and biochemical tests for seed vigor. *Seed Sci. and Technol.* 1:127-157.
- Woodward, W.T.W., and Malm, N.R.
1976. Influence of lint percentage on yield, boll, and fiber characteristics in acala strains of upland cotton. *Crop Sci.* 16:594-596.
- Worley, S., Jr.; Tuner, J.H.; and Ramey, H.H., Jr.
1974. Lint density index as a component of yield. 1974 Beltwide Cotton Prod. Res. Conf. Proc. pp. 142.
- Worley, S.; Ramey, H.H.; Harrell, D.C.; and Culp, T.W.
1976. Ontogenetic model of cotton yield. *Crop Sci.* 16:30-34.

- Wortman, L.S., and Rinke, E.H.
1951. Seed corn injury at various stages of processing and its effect upon cold test performance
Agron. J. 43:299-305.
- Wright, D.J., and Boulter, D.
1974. Purification and subunit structure of legumin of *Vicia faba* L. (Broad Bean) *Biochem. J.* 141:413-418.
- Wright, S.T.C., and Hiron, R.W.P.
1969. Abscisic acid, the growth inhibitor induced in detached wheat leaves by a period of wilting.
Nature (London) 224:719-720.
- Wulff, R., and Strain, B.R.
1982. Effects of CO₂ enrichment on growth and photosynthesis in *Desmodium paniculatum*. *Can. J. Bot.* 60:1084-1091.
- Wysc, R.
1980. Growth of sugar beet seedlings in various atmospheres of oxygen and carbon dioxide. *Crop Sci.* 20:456-458.

Y

- Yager, R.E.
1960. Possible role of pectic enzymes in abscission. *Plant Physiol.* 35:157-162.
- Yaklich, R.W., and Abdul-Baki, A.A.
1975. Variability in metabolism of individual axes of soybean seeds and its relationship to vigor
Crop Sci. 15:424-426.
- Yamaguchi, S.
1954. Some interrelationships of oxygen, carbon dioxide, sucrose, and ethylene in abscission. Ph.D. Dissertation, University of California, Los Angeles.
- Yatsu, L.Y., and Jacks, T.J.
1981. An ultra structural study of the relationship between microtubules and microfibrils on cotton (*Gossypium hirsutum* L.) cell wall reversals. *Am. J. Bot.* 68:771-777.
- Yeatman, C.W.
1971. Genetics of jack pine seedling response to CO₂ and pollination studies. Petawa, 1968-70. In Proceedings of the Twelfth Meeting of the Committee on Forest Tree Breeding in Canada, Universite Laval, Quebec, pp. 101-105.
- Yfoulis, A., and Fasoulas, A.
1978. Role of minimum and maximum environmental temperature on maturation period of the cotton boll. *Agron. J.* 70:421-425.
- Yimbo, P.O.
1980. Relative contribution of turgor pressure and available substrate for leaf growth. M.S. Thesis, Plant and Soil Science Dept., pp. 62.
- Yoshida, S.
1972. Physiological aspects of grain yield. *Ann. Rev. Plant Physiol.* 23:437-464.
- Yoshida, S.
1973. Effects of CO₂ enrichment at different stages of panicle development on yield components and yield of rice (*Oryza sativa* L.). *Soil Sci. Plant Nutr.* 19:311-316.
- Yoshida, S.; Cock, J.H.; and Pararo, F.T.
1971. Physiological aspects of high yields. Symposium on Rice Breeding Intl Rice Res. Inst., Los Banos, Philippines.
- Young, D.H.
1942. Cottonseed treatments and angular leaf spot control. *Phytopath.* 32:651.
- Young, E.F., Jr.; Taylor, R.M.; and Petersen, H.D.
1980. Day-degree units and time in relation to vegetative development and fruiting for three cultivars of cotton. *Crop Sci.* 20:370-374.

Yu, P.H.

1977. Isolation and partial characterization of arachin and α conarachin from the seeds of *Arachis hypogaea* L. Dissertation. Texas A&M University, College Station, Texas.

Yue-Quing, S.; Bing-Chu, F.; and Min-Zhi, S.

1980a. Approach to physiological functions of ethrel in the ripening of cotton boll. *Act. Bot. Sin.* 22:236-240.

Yue-Quing, S.; Bing-Chu, F.; and Min-Zhi, S.

1980b. The effect of photosynthesis and translocation in cotton leaf. *Act. Bot. Sin.* 22:136-140.

Z

Zaitlin, M., and Coltrin, D.

1964. Use of pectic enzymes in a study of the nature of intercellular cement of tobacco leaf cells. *Plant Physiol.* 39:91-95.

Zaitzev, G.S.

1928. Effect of temperature on the development of the cotton plant. *Trans. Turkestan Plant Breeding Sta. Tashkent*, No. 2 (as quoted in J.M. Hector, *Introduction to Botany of Field Crops* Vol. 2, pp. 894. Central News Agency, (Johannesburg)

Zarins, Z.M., and Cherry, J.P.

1981. Storage proteins of glandless cottonseed flour. *J. Food Sci.* 46:1855-1859.

Zeevaart, J.A.D.

1976. Physiology of flower formation. *Ann. Rev. Plant Physiol.* 27:321-348.

Zelitch, I.

1963. The control and mechanisms of stomatal movement. *Bull. Conn. Agr. Exp. Sta.* 664.

Zelitch, I.

1965. Environmental and biochemical control of stomatal movements in leaves. *Biol. Rev.* 40:463-482.

Zelitch, I.

1969. Stomatal control. *Ann. Rev. Plant Physiol.* 20:329-350.

Zelitch, I.

1971. Photosynthesis, Photorespiration, and Plant Productivity. *Acad. Press, New York*, pp. 347

Zelitch, I.

1979. Photorespiration: Studies with whole tissues, pp. 353-367. *In Photosynthesis II. Photosynthetic Carbon Metabolism and Related Processes*, M. Gibbs and E. Latzko (eds.), *Encyclopedia of Plant Physiology* Vol. 6. Springer-Verlag, NY.

Zenk, M.H., and Müller, G.

1963. *In vivo* destruction of exogenously applied indolyl-3-acetic acid as influenced by naturally occurring phenolic acids. *Nature* 200:761-763.

Zimmerman, R.H.; Krizek, D.T.; Klueter, H.H.; and Bailey, W.A.

1970. Growth of crabapple seedlings in controlled environments: Influence of seedling age and CO₂ content of the atmosphere. *J. Amer. Soc. Hort. Sci.* 95:323-325.

Zur, M.; Maram, A.; and Carmeli, R.

1970. Effect of CMH (N-dimethyl-N-chloroethyl-hydrazonium chloride) as compared with that of CCC (2-chloroethyl trimethylammonium chloride) on height, earliness and yield of cotton. *Israel J. Agric. Res.* 20:133-144.

Zur, M.; Marani, A.; and Karadavid, B.

1972. Effects of growth retardants CCC and CMH on cotton. *Cotton Grow. Rev.* 49:250-257.

Zurfluh, L.L., and Guilfoyle, T.J.

1980. Auxin induced changes in the pattern of protein synthesis in soybean hypocotyl. *Proc. Nat'l. Acad. Sci. USA*, 77:357-361.

Zurfluh, L.L., and Guilfoyle, T.J.

1982. Auxin- and ethylene-induced changes in the population of translatable messenger RNA in basal sections and intact Soybean hypocotyl. *Plant Physiol.* 69:338-340.