

---

---

REFERENCES

---

---

- Abrol, I.P. and Bhumbra, D.R. (1971). Saline and alkali soils in India - their occurrence and management, FAO World Resources Report No. 41 : 42.
- Adriaanse, A., Klopp, W. and Robbers, J.E. (1969). Characterisation of Phaseolus vulgaris cultivars by their electrophoretic patterns. J. Sci. Food Agric. 20 : 647.
- Adriaanse, A. and Robbers, J.E. (1970). Characterisation and fractionation studies on seed proteins of some of the Leguminosae by starch-gel electrophoresis. J. Sci. Food Agric. 21 : 126.
- Agarwal, R.L. (1980) Seed Technology, Oxford and IBH Publishing Co., New Delhi, India. p. 603.
- Ainsworth, C.C. and Sharp, P.J. (1989). The potential role of DNA probes in plant variety identification. Plant Vars. and Seeds 2 : 27.
- Alexandrescu, V., Hagima, I. and Gasper, I. (1977). Prolamine specificity in rye inbred lines. Revue Roumaine de Biochimie 14(2) : 77.
- Almgard, G. and Clapham, D. (1975). Isozyme variation distinguishing 18 Avena cultivars grown in Sweden. Swed. J. Agric. Res. 5 : 61.
- Almgard, G. and Clapham, D. (1977). Swedish wheat cultivars distinguished by contents of gliadins and isozymes. Swed. J. Agric. Res. 7 : 137.
- Andersen, H.J. (1982). Isozyme characters of forty seven barley cultivars and their application in cultivar identification. Seed. Sci. Technol. 10(3) : 405.
- Anderson, N.G., Tollaksen, S.L., Pascoe, F.H. and Anderson, L. (1985). Two dimensional electrophoretic analysis of wheat seed proteins. Crop Science 25(4) : 667.
- Anon. (1983). FAO Production Year Book, FAO, Rome.
- Anon. (1985). Handbook of cultivars. Published by Central Seed Committee Department of Agriculture and Cooperation, Ministry of Agriculture and Rural Development. Govt. of India, New Delhi, p. 421.
- Ayers, A.D. and Hayward, H.E. (1948). A method for measuring the effects of soil salinity on seed germination with observations on several crop plants. Soil Sci. Soc. Amer. Proc. 13 : 224.
- Bal, A.R. (1980). Response of rice plants to saline substrates. Ph.D. Thesis, Calcutta University.
- Bal, A.R. and Chattopadhyay, N.C. (1985). Effect of NaCl and PEG 6000 on germination and seedling growth of Rice (Oryza sativa L.). Biologia Plantarum (Praha). 27 (1) : 65.
- Bal, A.R. and Chattopadhyay, N.C. (1987). Effects of salts singly and in combination on germination and seedling growth of rice. Agrochimica 31 : 226.
- Barratt, D.H.P. (1980). Cultivar identification of Vicia faba L by sodium dodecyl sulphate polyacrylamide gel electrophoresis of seed globulins. J. Sci. Fd. Agric. 11 : 813.
- Bassiri, A. (1976). Barley cultivar identification by means of isozyme electrophoretic patterns. Can. J. Pl. Sci. 56 : 1.

- Baum, B.R., Petruk, W. and Bailey, L.G. (1980). Assessment of the value of endospermic starch granules for the taxonomy of barley (*Hordeum*) species and cultivars with special emphasis on their identification, using the technique of image analysis. Zeitschrift für Pflanzenzüchtung 35 : 212.
- Beachy, R.N., Jarvis, N.P. and Barton, K.A. (1981). Biosynthesis of subunits of the soybean 7S storage protein. J. Mol. Appl. Genet. 1 : 19.
- Bernardin, J.E. and Kasarda, D.D. (1973). The microstructure of wheat protein fibrils. Cereal Chem. 50 : 736.
- Bhumbla, D.R. and Singh, N.T. (1965). Studies on the effects of salts on seed germination of various field crops. Sci. Cult. 31 : 96.
- Bietz, J.A. and Wall, J.S. (1972). Wheat gluten subunits : molecular weights determined by sodium dodecyl sulphate - polyacrylamide gel electrophoresis. Cereal Chem. 49 : 416.
- Bietz, J.A., Shepherd, K.W. and Wall, J.S. (1975). Cereal Chem. 56 : 513 (cited from Brown et al., 1982).
- Bietz, J.A., Huebner, F.R., Sanderson, J.E. and Wall, J.S. (1977). Wheat gliadin homology through N-terminal amino acid sequence analysis. Cereal Chem. 54 : 1070.
- Bietz, J.A., Paulis, J.W. and Wall, J.S. (1979). Zein subunit homology revealed through amino terminal sequence analysis. Cereal Chem. 56 : 327.
- Bishop, L.R. (1928). J. Inst. Brew 34 : 101 (cited from Byers et al., 1978).
- Bishop, L.R. (1930). J. Inst. Brew 36 : 336 (cited from Brown et al., 1982).
- Blagrove, R.J., Lilley, G.G. and Davey, R. (1980). Aust. J. Plant Physiol. 7 : 221 (cited from Brown et al., 1982).
- Blogg, D. and Imrie, B.C. (1982). Starch gel electrophoresis for soybean cultivar identification. Seed Sci. Technol. 10 : 19.
- Bollini, R. and Vitale, A. (1981). Genetic variability in charge heterogeneity and polypeptide composition of phaseolin, the major storage protein of *Phaseolus vulgaris*; and peptide maps of its three major sub-units. Physiol. Plant. 52 : 96.
- Booth, M.R. and Ewart, J.A.D. (1969). Studies on four components of wheat gliadins. Biochim. Biophys. Acta 181 : 226.
- \* Boulter, D. (1979). In : Seed Protein Improvement in Cereals and Grain Legumes, Vol. I, p. 125.
- Brickell, C.D., Kelly, A.F., Schneider, F., Voss, F.G. and Richens, R.H. (1980). Regnum. Vegetabile Volume 104, International Code of nomenclature for cultivated plants, 1980. Bohn, Scheltema and Holkema, Utrecht, p. 32.
- Brisson, J.D. and Peterson, R.L. (1976). A critical review of the use of scanning electron microscopy in the study of the seed coat. In : Scanning Electron Microscopy, Part VII, p. 477 (Proceedings of the Workshop on Plant Science Applications of SEM, IIT Research Institute, Chicago, Illinois, U.S.A.).
- \* Boscuk, S. (1981). Effect of kinetin and salinity on germination of tomato, barley and cotton seeds. Ann. Bot. 48 : 81.

- Brisson, J.D. and Peterson, R.L. (1977) The scanning electron microscope and X-ray microanalysis in the study of seeds : a bibliography covering the period of 1967-76. In : Scanning Electron Microscopy, Vol. II, p. 697 (Proceedings of the Workshop on Other Biological Applications of the SEM/ TEM, IIT Research Institute, Chicago, Illinois, U.S:A.
- Brown, A.H.D. (1978). Isozymes, plant population, genetic structure and genetic conservation. Theoret. Appl. Genet. 52 : 145.
- Brown, A.H.D. and Marshall, D.R. (1981a) Evolutionary changes accompanying colonization in plant. In : Evolution Today. G.G.E. Sardder and J.L. Reveal (Eds.). Proc. 11 Int. Congress Sys. Evol. Biol., p. 351.
- Brown, J.W.S., Ma, Y., Bliss, F.A. and Hall, T.C. (1981b) Genetic variations in the subunits of globulin-1 storage protein of French bean. Theoret. Appl. Genet. 59 : 83.
- Brown, J.W.S., Erslund, D.R. and Hall, T.C. (1982a). 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, p. 3.
- Brown, J.W.S., Osborn, T.C., Bliss, F.A. and Hall, T.C. (1982b). Bean lectins. Part 1 : Relationships between agglutinating activity and electrophoretic variation in the lectin - containing G2/albumin seed proteins of Frenchbean (Phaseolus vulgaris L.). Theoret. Appl. Genet., 62 : 263.
- Byers, M., Kirkman, M.A. and Miflin, B.J. (1978). Factors affecting the quality and yield of seed protein. In : Plant Proteins. Butterworths, London.p227.
- Cardy, B.J. and Beversdorf, W.D. (1984), Identification of soybean seed cultivars using isoenzyme electrophoresis. Seed Sci. Technol. 12 : 943.
- Carroll, D.J., Cambell, M., Thrope, J.W. and Robertson, J. (1983). The potential use of isoelectric focussing for the identification and discrimination of grass species on the basis of their seed proteins. Journal of Forensic Science Society 23 : 297.
- Casey, R. (1982). The genetics of pea seed storage proteins. Qual. Planta. 31 : 281.
- Casey, R. and Sanger, E. (1980). Biochem. Soc. Trans. 8 : 657 (cited from Brown et al., 1982).
- Catsimpoolas, N., Kenney, J.A., Meyer, E.W. and Szuhaj, B.F. (1971). J. Sci. Fd. Agric. 22 : 448 (cited from Brown et al., 1982).
- Chakraborti, A.K., Pathak, A.K. and Chattopadhyay, N.C. (1987). Effect of salinity on germination and seedling growth of jute (Corchorus sp.). Indian Agric. 31 : 141.
- Chauhan, J.S. and Nanda, J.S. (1984). Varietal identification in rice (Oryza sativa L.) by physico-chemical characters of the grains and electrophoretic variants of salt soluble seed proteins. Seed Res. 12(1),: 78.

- Chen, L.F.O., Cheng, M.C. and Chen, S.C.G. (1987). Similarity and diversity of seed proteins in rice varieties. Bot. Bull. Acad. Sin. 28 : 169.
- Chu, T.M., Aspinall, D. and Paleg, L.G. (1976). Stress metabolism VII. Salinity and proline accumulation in barley. Aust. J. Plant Physiol. 3 : 219.
- Clydesdale, A. and Draper, S.R. (1982). A revised classification of wheat gliadin electrophoregrams. J. Nat. Inst. Agric. Bot. 16 : 53.
- Cooke, R.J. (1983). The characteristics of Pisum sativum L. (partim) (field pea) cultivars by sodium dodecyl sulphate polyacrylamide gel electrophoresis. J. Nat. Inst. Agric. Bot. 16 : 213.
- Cooke, R.J. (1984). The characterization and identification of crop cultivars by electrophoresis. Electrophoresis 5 : 59.
- Cooke, R.J. (1987) The classification of wheat cultivars using a standard reference electrophoresis method. J. Nat. Inst. Agric. Bot. 17(3) : 273.
- Cooke, R.J. (1988). Electrophoresis in plant testing and breeding. Advances in Electrophoresis. 2 : 1.
- Cooke, R.V. (1989). The use of electrophoresis for the distinctness testing of varieties of autogamous species. Plant Vars. & Seeds 2 : 3.
- Cooke, R.J. and Cliff, E.M. (1983). Barley cultivar characterisation by electrophoresis. I. A method for acid polyacrylamide gel electrophoresis of hordein proteins. J. Nat. Inst. Agric. Bot. 16(2) : 189.
- Cooke, R.J. and Morgan, A.G. (1986). A revised classification of barley cultivars using a standard reference electrophoresis method. J. Nat. Inst. Agric. Bot. 17(2) : 169.
- Coulson, C.B. and Sim, A.K. (1964). Proteins of various species of wheat and closely related genera and their relationship to genetical characteristics. Nature 202 : 1305.
- Croy, R.R.D., Derbyshire, E., Krishna, T.G. and Boutler, D. (1979). Legumin of Pisum sativum and Vicia faba. New Phytol. 83 : 29.
- Croy, R.R.D., Gatehouse, J.A., Tyler, M. and Bontter, D. (1980a). The purification and characterization of a third storage protein (Convicilin) from seeds of pea (Pisum sativum L.). Biochem. J. 191 : 509.
- Croy, R.R.D., Gatehouse, J.A., Evans, I.M. and Boutler, D. (1980b). Characterization of storage protein sub-units synthesized in vitro by polyribosomes and RNA from developing pea (Pisum sativum L.). II. Vicilin. Planta (Berl.) 148 : 57.
- Czaja, A. Th. (1963). Neue untersuchungen an der Testa der Tomatensamen. Planta 59 : 262.
- D'Arcy, W.G. (1979). The classification of the Solanaceae. In : The Biology and Taxonomy of the Solanaceae (J.G. Hawkes, R.N. Lester and A.D. Skelding, (Eds.). Academic Press, London, p. 3.
- Danielsson, C.E. (1949). Seed globulins of the Gramineae and Leguminosae. Biochem. J. 44 : 387.

- Davis, B.J. (1964) Disc electrophoresis - II. Methods and application to human serum proteins. Ann. New York Acad. Sci. **121** : 404.
- Day, K.L. (1977). A method for the evaluation of pigmentation of the aleurone layer of barley. J. Natn. Inst. Agric. Bot. **14** : 215.
- Davis, P.H. and Heywoods, V.H. (1963). Principles of Angiosperm Taxonomy. Van Nostrand. Princeton, N.J., New York.
- Delouche, J.C. (1990). Variability in the storability of crop seed lots. Abstracts, International Conference on Seed Science and Technology, Feb 21-25, 1990, New Delhi. Organised by Indian Society of Seed Technology, New Delhi, p. 37.
- Derbyshire, E., Wright, D.J. and Boutler, D. (1976). Photochemistry **15** : 3 (cited from Yarwood, 1978).
- Dhesi, N.S., Fedak, G. and Desormeaux, R.W. (1980). Identification of Canadian two-rowed barley cultivars by electrophoretic techniques. J. Seed Technol. **5** (2) : 152.
- Doll, H., Brown, A.H.D. 1979. Hordein variation in wild (Hordeum spontaneum) and cultivated barley. Can. J. Genet. Cytol. **21** : 391.
- Draper, S.R. and Craig, E.A. (1981). A phenotypic classification of wheat gliadin electrophorograms. J. Nat. Inst. Agric. Bot. **15** : 390.
- du Cros, D.L. and Wrigley, C.W. (1979). Improved electrophoretic methods for identifying cereal varieties. J. Sci. Food Agric. **30** : 785.
- Duranti, M., Guerrieri, N., Takahasi, T. and Cerletti, P. (1988). The legumin like storage proteins of Lupinus albus seeds. Phytochemistry (Oxf.) **27** : 15.
- Ellis, J.R.S. and Bemister, C.H. (1977). The identification of UK wheat varieties by starch gel electrophoresis of gliadin proteins. J. Nat. Inst. Agric. Bot. **14** : 221.
- Evans, R.K. and Abernethy, R.H. (1983). Identification of Cicer milkvetch cultivars using SDS-PAGE. Can. J. Plant Sci. **63** (4) : 1087.
- Facsar, G. (1972). Seed type system of grape varieties (Vitis vinifera L.) Szolo es Gyumolestermesztes **7** : 191.
- Faha, A. (1982) Plant Anatomy Third Edition. Pergamon Press, U.K. p. 484.
- Ferguson, J.M. and Grabe, D.F. (1986). Identification of cultivars of perennial ryegrasses by SDS-PAGE of seed proteins. Crop Science **26** : 170.
- Frankel, O.H. and Bennett, E. (Eds.) (1970). Genetic resources in plants - their exploration and conservation. London, Blackwell Scientific Publications, p. 554.
- Frankel, O.H. and Hawkes, J.G. (Eds.) (1975). Crop Genetic Resources for Today and Tomorrow. IBP Synthesis, Vol. 2, Cambridge, Cambridge University Press.
- Garg, B.K. (1976). Effects of saline alkaline conditions on plant growth and metabolism. Ph.D. Thesis. Hissar Agricultural University.
- Garg, D.K., Kaul, M.L.H. and Singh, S.P. (1972). Correlations amongst seed characteristics of 55 hybrids of pearl millet (Pennisetum typhoides). J. Ind. Bot. Soc. **51** : 280.

- Gatenby, A.A. and Cocking, E.C. (1978). The polypeptide composition of the subunits of fraction I protein in the genus Lycopersicon. Plant Sci. Lett. 13 : 171.
- Gayler, K.R. and Sykes, G.E. (1981).  $\beta$ -conglycinin in developing soybean seeds. Plant Physiol. 67 : 958.
- Gebre, H., Khan, K. and Foster, A.E. (1986). Barley cultivar identification by polyacrylamide gel electrophoresis of hordein proteins : Catalog of cultivars. Crop Science 26 : 454.
- Gontinetta, E., Maggiore, T.; Salamini, F., Lorenzoni, C., Pioli, F. and Soave, C. (1975). Protein studies in 46 opaque - 2 strains with modified endosperm texture. Maydica 20 : 145.
- Gianazza, E., Righetti, P.E., Pioli, F., Galante, E. and Soave, C. (1976). Size and charge heterogeneity of zein in normal and opaque-2-maize endosperms. Maydica 21 : 1.
- Gilliland, T.J. (1989). Electrophoresis of sexually and vegetatively propagated cultivars of allogamous species. Plant Vars & Seeds 2 : 15.
- Gilliland, T.J., Camlin, M.S. and Wright, C.E. (1982). Evaluation of phosphoglucosomerase allozyme electrophoresis for the identification and registration of cultivars of perennial ryegrass (Lolium perenne). Seed Sci. Technol. 10 : 415.
- Goodrich, W.J.; Cooke, R.J. and Morgan, A.G. (1985). The application of electrophoresis to the characterization of cultivars of Vicia faba L. FABIS Newsletter 13 : 8.
- Graham, T.O. (1959). Impact of recorded Mendelian factors on the tomato. 1929-1959. Rep. Tom. Gen. Coop. 9 : 37.
- Guerrier, G. (1983). Germination in vegetables and oil plants in the presence of NaCl. Seed Sci. Technol. 11 : 281.
- Gunzel, G. (1976). Sortendifferenzierung bei Weizen mittels polyacrylamidgel - Elektrophorese von gliadin. Zeitschrift für Ackerund Pflanzenbau 143 : 83.
- Gupta, S.K. and Robbelen, G. (1986). Identification of rape seed (Bassica napus) cultivars by electrophoresis. Zeitschrift für Pflanzenzüchtung 96 : 363.
- Hagen, G. and Rubenstein, I. (1980). Plant Sci. Lett. 19 : 217. (cited from Brown et al., 1982).
- Hesse, P.R. (1971). A Text Book of Soil Chemical Analysis. John Murray (Publishers). Ltd. London, WIX 4BD.
- Higgins, T.J.V. and Spencer, D. (1977). Cell-free synthesis of pea-seed proteins. Plant Physiol. 60 : 655.
- Higgins, J., Evans, J.L. and Reed, P.J. (1981). Classification of western european cultivars of Vicia faba L. J. Natn. Inst. Agric. Bot. 15 : 480.
- Hill, J.E. and Breidenbach, R.W. (1974). Plant Physiol. 53 : 747 (cited from Brown et al., 1982).

- Hofsten, A.V. (1970) Proceedings of International Conference of Science, Technology and Marketing of Rapeseed and Rapeseed Products. Ste Adele, Quebec, Canada. Rapeseed Association, Winnipeg, Manitoba, Canada. p. 70.
- Holden, J.H.W. and Williams, J.T. (Eds.) (1984) Crop Genetic Resources : Conservation and Evolution. London, George Allen and Unwin, p. 296.
- Holder, A.A. and Ingversen, J. (1978). Peptide mapping of the major components of in vitro synthesized barley hordein : evidence of structural homology. Carlsberg Res. Commun. 73 : 177.
- Holm, E. and Johansson, E. (1979). Undersökning av sockerbetornas sarskiljbarhet (Investigations on distinctness of sugarbeet cultivars). Meddelande från Statens Centrala Frukontrollanstalt 54 : 75.
- Hrachova, B., Pospisil, F. and Vancura, J. (1985). A contribution to the study of pollen grain and testa microstructure in winged bean [Psophocarpus tetragonolobus (L.) DC]. Agricultura Tropica et Subtropica 18 : 135.
- Huebner, F.-R. and Wall, J.S. (1978). Fractionation and quantitative differences in glutenin from wheat varieties varying in baking quality. Cereal Chem. 53 : 258.
- Hunziker, A.T. (1979). South American Solanaceae : a synoptic survey. In : The Biology and Taxonomy of the Solanaceae (eds. J.G. Hawkes, R.N. Laster and A.D. Skelding). Academic Press, London pp. 49-85.
- Hwang, D.L.-R., Lin, K.-T.D., Yang, W.-K. and Foard, D.E. (1977a). Biochim. Biophys. Acta 495 : 369 (cited from Brown et al., 1982).
- Hwang, D.L.-R., Foard, D.E. and Wei, C.H. (1977b). J. Biol. Chem. 252 : 1099 (cited from Brown et al., 1982).
- Ibragimov, A.P., Tuichiev, A.V. and Tursunbaev, P. (1973). Electrophoretic characteristics of the protein in the seed of different varieties of cotton. Uzbekii biologicheskii Zhurnal 4 : 66. [Plant breeding Abstracts (1976) 46 : 466].
- ISTA (1964). Varietal purity examination. Proceedings of the International Seed Testing Association 29 : 759.
- Ivanov, Ch. P., Mesrob, B. and Prusik, Z. (1968). Can. J. Biochem. Physiol. 46 : 1301 (cited from Byers et al., 1978).
- Jackson, M.L. (1973). Soil Chemical Analysis. Prentice Hall of India Pvt. Ltd., New Delhi.
- Jennings, A.C., Morton, R.K. and Palk, B.A. (1963). Aust. J. Biol. Sci. 16 : 366 (cited from Brown et al., 1982).
- Jones, R.A. (1986). High salt tolerance potential in Lycopersicon species during germination. Euphytica 35 : 515.
- Kapse, S.S. and Nerkar, Y.S. (1985). Electrophoresis of cotton cultivars. Seed Sci. Technol. 13 : 847.
- Kasarda, D.D., Da-Roza, D.A. and Ohms, J.I. (1974). N-terminal sequence of  $\alpha$ -gliadin. Biochim. Biophys. Acta 351 : 290.



- Khan, A.H. and Naqvi, S.S.M. (1984). The effect of NaCl and PEG on germination and water contents of two mungbean (Phaseolus aureus L.) varieties. Pakistan Journal of Botany 16 : 123.
- Kilamura, K. and Shibasaki, K. (1975a). Agric. Biol. Chem. 39 : 945 (cited from Brown et al., 1982).
- Kitamura, K. and Shibasaki, K. (1975b). Agric. Biol. Chem. 39 : 1509 (cited from Brown et al., 1982).
- Koie, B., Inversen, J., Andersen, A.J., Doll, H. and Eggum, B.O. (1976). In : Evaluation of Seed Protein Alterations by Mutation Breeding. p. 55, IAEA, Vienna, STI/PUB/426.
- Konavev, V.G., Gavrilyuk, I.P., Gubareva, N.K. and Peneva, T.I. (1979). Seed proteins in genome analysis, cultivar identification and documentation of cereal genetic resources : A review. Cereal Chemistry 56 : 272.
- Konarev, V.G., Gavriljuk, I.P., Gubareva, N.K. and Choroshajlov, H.G. (1981). Electrophoretic and serological methods in seed testing. Seed Sci. Technol. 9 : 807.
- Koshiyama, I. and Fukushima, D. (1976a). Phytochemistry 15 : 157 (cited from Brown et al., (1982).
- Koshiyama, I. and Fukushima, D. (1976b). Phytochemistry 15 : 161 (cited from Brown et al., 1982).
- Krishna, I.G., Pawar, S. and Mitra, R. (1986). Variation and inheritance of the arachin polypeptides of groundnut. Theoret. Appl. Genet. 73 : 82.
- Kumar, S. (1973). Effect of Saline Alkaline Conditions and Applied Ascorbic Acid on Nodulation, Nitrogen Fixation and Growth of some Leguminous Crops. Ph.D. Thesis, Hissar Agricultural University.
- Ladizinsky, G. and Hymowitz, T. (1979). Seed protein electrophoresis in taxonomic and evolutionary studies. Theoret. Appl. Genet. 54 : 145.
- Lafiandra, D. and Kasarda, D.D. (1985). One- and two-dimensional (two ph) polyacrylamide gel electrophoresis in a single gel : separation of wheat proteins. Cereal Chemistry 62 : 314.
- Larkins, B.A., Pederson, K., Hurkman, W.J., Handa, A.K., Mason, A.C., Tsai, C.Y. and Hermodsen, M.A. (1980). In : Genome Organisation and Expression in Plants (C.J. Leaver, Ed.). Plenum Press, New York. p. 203.
- Larkins, B.A. (1981). Seed storage proteins. In : The Biochemistry of Plants - a comprehensive treatise. Vol. 6. P.K. Stumpf and E.E. Conn. (Eds.). p. 449.
- Larsen, A.L. (1967). Electrophoretic differences in seed protein among varieties of soybean, Glycine max Merrill. Crop Sci. 7 : 311.
- Lee, K.H., Jones, R.A., Dalby, A. and Tsai, C.Y. (1977). Genetic regulation of storage protein synthesis in maize endosperm. Biochem. Genet. 14 : 641.

- Linskens, H., Pfahler, P.L. and Knuiman-Stevens, E.L. (1977). Identification of soybean cultivars by the surface relief of the seed coat. Theoret. Appl. Genet. 50 : 147.
- Lowry, O.H., Rosebrough, N.J., Forr, A.L. and Randall, R.J. (1951). Protein measurement with the Folin-phenol reagent. J. Biol. Chem. 193 : 265.
- Lutsishina, E.G. and Panchenko, D.K. (1987). IR spectra of wheat protein gluten complex. Fiziol. Biokhim. Kult. Rast. 19 : 45.
- Ma, Y. and Bliss, F.A. (1978). Seed proteins of common bean. Crop. Sci. 18 : 431.
- Maliwal, G.L. and Paliwal, K.V. (1967). Salt tolerance studies on some varieties of wheat and barley at germination stages. Indian J. Plant Physiol. 10 : 26.
- Maliwal, G.L. and Paliwal, K.V. (1984). Salt tolerance of some paddy, maize, sorghum, cotton and tobacco varieties at germination and early growth stage. Agricultural Science Digest., India 4 : 147.
- Manohar, M.S. and Heydecker, W. (1964). Effects of water potential on germination of pea seeds. Nature 202 : 22.
- Marchylo, B.A. and LaBerge, D.E. (1980). Barley cultivar identification by electrophoretic analysis of hordein proteins. I. Extraction and separation of hordein protein and environmental effects on the hordein electrophoregram. Can. J. Plant Sci. 60 : 1343.
- Marchylo, B.A. and LaBerge, D.E. (1981). Barley cultivar identification by electrophoretic analysis of hordein proteins. II. Catalogue of electrophoregram formulae for Canadian - grown barley cultivars. Canad. J. Pl. Physiol. 61 : 859-870.
- Matta, N.K. and Gatehouse, J.A. (1982). Inheritance and mapping of storage protein genes in Pisum sativum L. Heredity 48 : 383.
- McCausland, J. and Wrigley, C.W. (1977). Identification of Australian barley cultivars by laboratory methods : gel electrophoresis and gel isoelectric focusing of the endosperm protein. Australian Journal of Experimental Agriculture and Animal Husbandry 17 : 1020.
- Mekee, G.W. (1973). Chemical and biochemical techniques for varietal identification. Seed Sci. Technol. 1 : 181.
- Mecham, D.K., Kasarda, D.D., Qualoet, C.O. (1985). Identification of western U.S. wheat varieties by polyacrylamide gel electrophoresis of gliadin proteins. Hilgardia 53(7) : 32.
- Meinke, D.W., Chen, J. and Beachy, R.N. (1981). Expression of storage protein genes during soybean seed development. Planta 153 : 130.
- Mexal Fisher, J.T., Oster Young, J.R. and Reid, C.P.P. (1975). Oxygen availability in polyethylene glycol solution and its implication in plant water relation. Plant Physiol. 55 : 20.
- Michael, G. (1963). Qualitas PL. Mater. Veg. 10 : 248 (cited from Byers et al., 1978).

- Mifflin, B.J. and Shewry, P.R. (1977). An introduction to the extraction and characterization of barley and maize proteins. In : Techniques for the Separation of Barley and Maize Proteins, Mifflin, B.J. and Shewry, P.R., Eds., EEC, Luxembourg, 13 : 114.
- Mifflin, B.J. and Shewry, P.R. (1979a). The biology and biochemistry of cereal seed protamines, In : Seed Protein Improvement in Cereals and Grain Legumes, Vol. I, IAEA Proc. Ser. 476, Vienna, p. 137.
- Mifflin, B.J. and Shewry, P.R. (1979b). The synthesis of proteins in normal and high-lysine barley seeds, In : Recent Advances in the Biochemistry of Cereals, Laidman, D.L. and Jones, R.G.W. (Eds.), Academic Press, New York, p. 239.
- Mifflin, B.J. and Shewry, P.R. (1981). In : The Physiology and Biochemistry of Plant Productivity (J. Bewley, Ed.), Martinus Nijhoff, The Netherlands, p. 195.
- Millerd, A. (1975). Biochemistry of legume seed proteins. Ann. Rev. Plant Physiol. 26 : 53.
- Mittal, S.p., Thomas, T.A. and Srivastava, G. (1966). Assessment of Genetic stocks of Tomato (Lycopersicon esculentum Mill.) and its Wild Relatives. I.C.A.R. Technical Series (Agric.) No. 1, I.C.A.R., New Delhi.
- Molina-Cano, J.L. and Elena Rosello, J.M. (1978). A further contribution to the classification of barley cultivars : use of numerical taxonomy and biochemical methods. Seed Sci. Technol. 6 : 593.
- Moreira, M.A., Hermodson, M.A., Larkins, B.A. and Nielson, N.C. (1979). Partial characterization of the acidic and basic polypeptides of glycinin. J. Biol. Chem. 254 : 9921.
- Moreira, M.A., Hermodson, M.A., Larkins, B.A. and Nielson, N.C. (1981). Comparison of the primary structure of the acidic polypeptides of glycinin. Arch. Biochem. Biophys. 210 : 633.
- Morgan, A.G. (1989). Chromatographic applications in cultivar identification. Plant Vars. & Seeds 2 : 35.
- Muller, C.H. (1940). A revision of the genus Lycopersicon. U.S.D.A. Misc. Publ. 328 : 29.
- Naismith, W.E.F. (1955). Ultracentrifuge studies on soybean protein. Biochem. Biophys. Acta 16 : 203.
- Nelson, O.E. (1980). In : Advances in Cereal Science and Technology, Vol. 3 (Y. Pomeranz, Ed.), American Association of Cereal Chemists, St. Paul, Minnesota, p. 41.
- Nielson, H.C., Babcock, G.E. and Senti, F.R. (1962). Arch. Biochem. Biophys. 96 : 252 (cited from Brown et al., 1982).
- Niemyski, K. and Grzelak, K. (1975). Identifying Kentucky bluegrass (Poa pratensis) cultivars by morphological characters. Seed Sci. Technol. 3 : 625.
- Nittler, L.W. (1973). Growth chamber and green house varietal purity tests. Seed Sci. Technol. 1 : 163.

- Nittler, L.W. (1980). Testing Kentucky blue grass seed. Search : Agriculture 4 : 16, Cornell University.
- Nittler, L.W. (1981). Use of seedling characteristics in testing birdsfoot trefoil seed for varietal purity. Search : Agriculture 17 : 15, Cornell University.
- Olsen, K.J. (1975). Characters used for identification of barley cultivars. Seed Sci. Technol. 3 : 182.
- Olsen, S.R., Cole, C.V., Watanabe, F.S. and Dean, L.A. (1954). Estimation of available phosphorus in soils by extraction with sodium bicarbonate. Circ. U.S. Dept. Agric. p. 939.
- Oram, R.N., Doll, H. and Koie, B. (1975). Hereditas 80 : 53 (cited from Brown et al., 1982).
- Osborne, T.B. (1924). The Vegetable Proteins, Longmans Green, London (2nd ed.), p. 154.
- Parnell, A. (1983). Identification of new wheat varieties using a standard electrophoresis method. J. Nat. Inst. Agric. Bot. 16 : 183.
- Patey, A.L., Evans, D.J., Tipaldy, R., Byfield, P.G.H. and Matthews, E.W. (1975). Sequence comparison of  $\alpha$ -gliadin and coeliac toxic  $\gamma$ -gliadin. J. Lancet. 2(393) : 718.
- Pathak, A.K. (1989). Morphological physiological and biochemical approaches towards identification of jute cultivars. Ph.D. Thesis, Calcutta University.
- Pathak, A.K. and Chattopadhyay, N.C. (1989). Characterization of jute (Corchorus sp.) cultivars by polyacrylamide gel electrophoresis of soluble seed proteins. Indian J. Exp. Biol. 27 : 196.
- Pauksens, J. (1975). Methods for determination of cultivar trueness and purity in Maize (Zea mays L.). Seed Sci. Technol. 3 (I) : 176.
- Payne, R.C. (1976). A literature review of laboratory techniques used for cultivar identification. Newsl. Assoc. Off. Seed Analyst 50(3) : 26.
- Payne, R.C. and Morris, L.F. (1976). Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1 : 1.
- Payne, R.C. and Koszykowski, T.J. (1977). A germination procedure that will aid in differentiating soybean cultivars. The News Letter of the Association of Official Seed Analysts 51(5) : 52.
- Payne, R.C., Koszykowski, T.J. (1984). Electrophoretic differences among field grown plants and cultivars of perennial ryegrass. Newsletter of the Association of Official Seed Analysts 58(1) : 65.
- Payne, R.C., Scott, J.A. and Koszykowski, T.J. (1980). An esterase isoenzyme difference in seed extracts of annual and perennial rye grass. J. Seed Technol. 5 (2) : 14.
- Peruffo, A., Dal, B. (Belin Peruffo, A. Dal), Olivieri, A.M. and Tealdo, E. (1984). SDS-PAGE of soybean proteins for variety identification. Genetica Agraria 38 : 328.

- Picken, A.J.F., Stewart, K. and Klapwijk, D. (1986). Germination and vegetative development. In : *The Tomato Crop* (J.G. Atherton and J. Rudich, Eds.). Chapman and Hall Ltd., London.
- Pogna, N.E., Borghi, B., Mellini, F., Peruffo, A., Dal, B. and Nash, R.J. (1986). Electrophoresis of gliadins for estimating the genetic purity in hybrid wheat seed production. *Genetica Agraria* 40 : 205.
- Pregl, F. (1930). Quantitative organic microanalysis (Eng. Transl. by Fyleman, E.). Churchill & Sons.
- Prins, H. De and Weghe, L. Van De (1984). Identification of rye grass cultivars by electrofocussing on polyacrylamide gels. *Revue de L'Agricultura* 37 : 1217.
- \* Przyleyska, J., Zimniak-Przyleyska, Z. and Darbrowska, T. (1973). Isozyme patterns in several cultivated varieties of barley (*Hordeum vulgare* L.). *Genet. Pol.* 14 : 61.
- Rala, N.A. and Azimov, R.A. (1988). Effect of NaCl solutions on germination and seedling growth of cotton. *Uzbekskii Biologicheskii Zhurnal.* No. 2 : 22.
- Ramirez, L. and Pissabarro, G. (1985). Isozyme electrophoretic patterns as a tool to characterize and classify rye (*Secale cereale* L.) seed sample. *Euphytica* 34 : 793.
- Raychaudhuri, M., Niyogi, K. and Singh, M. (1987). Temporal regulation in the synthesis of concanavalin A and -mannosidase in the seeds of *Canavalia ensiformis*. *Phytochemistry* (Oxf.) 26 : 3201.
- Renzo, M.A. Di., Pahlen, A. VonDer, Robutte, J.L. and Mancuso, N. (1983). Differentiation of cultivars of soybean (*Glycine max* L.) Mervill by means of colour characteristics and biochemical reactions of the seeds. *Revista de Investigaciones Agropecuarias* 18 : 79.
- Rick, C.M. (1976). Tomato (family Solanaceae). In : *Evolution of Crop Plants*. (N.W. Simmonds, Ed.). Longman Publications, p. 268.
- Righetti, P.G., Gianazza, E., Salamini, F. and Galante, E. (1977). Zein macromolecular properties, biosynthesis and genetic regulation. In : *Electrofocussing and Isotachophoresis*. Radola B.J. and Graesslin, D. (Eds.). Walter de Gruyter, Berlin, p. 199.
- Roberts, E.H. (1972). Cytological, genetical and metabolic changes associated with loss of viability. In : *Viability of Seeds* (E.H. Roberts, Ed.). p. 253. Chapman and Hall, London.
- Rosta, K. (1975). Variety determination in rice (*Oryza sativa* L.). *Seed Sci. Technol.* 3 : 161.
- Salcedo, G., Sanchez-Monge, R., Argamenteria, A. and Argoncillo, C. (1980). The A-hordein as a group of salt soluble hydrophobic proteins. *Plant Sci. Lett.* 19 : 109.
- Sammour, R.H. (1988). Flax seed protein comparison by various PAGE-techniques in slabs. *J. Agron. Crop. Sci.* 160 : 271.
- \* Prisco, J.T. and O'Leary, J.W. (1970). *Turrialba* 20 : 177 (Original not seen).

- Sapirstein, H. and Bushuk, W. (1986). Computer aided wheat cultivar identification and analysis of densitometric scanning profiles of gliadin electrophoregrams. Seed Sci. Technol. 14 : 489.
- Sarkar, R. and Bose, S. (1984). Electrophoretic characterization of rice varieties using single seed (salt soluble) proteins. Theoret. Appl. Genet. 68 : 415.
- Sathe, S.K., Lilley, G.G., Mason, A.C. and Weaver, C.M. (1987). High resolution sodium dodecyl sulphate polyacrylamide gel electrophoresis of soybean (Glycine max L.) seed proteins. Cereal Chem. 64 : 380.
- Schoen, J.F. and Payne, R.C. (1984). Electrophoretic and morphological differences among cultivars of dark red kidney beans. Newsletter of the Association of Official Seed Analysts 58 : 27.
- Schollenberger, C.J. and Simon, R.H. (1945). Determination of exchange capacity and exchangeable bases in soil - ammonium acetate method. Soil Sci. 59 : 13.
- Scriban, R. and Strobbel, B. (1979). Chemotaxonomic study of barley and malt by gel electrofocalization. MBAA Technical Quarterly 16 : 28.
- Senser, F. (1976). Sortenmerkmale von Weizenkornern. I. Aussere Merkmale der Weizenkorner als Kriterien einer Sortenbestimmung. Zeitschrift fur Lebensmittel - Untersuchungen und - Forschung 161 : 19.
- Shalhavet, J. and Yaron, B. (1973) Effect of soil salinity on tomato growth. Plant Soil 39 : 285.
- Sharma, S., Kumar, R. and Malik, C.P. (1987). Salt stress induced changes in protein degradation and proteolytic activity in germinating chickpea (Cicer arietinum L.) seeds. Legume Res. 9 : 91.
- Shewry, P.R., Pratt, H.M., Charlton, M.J. and Miflin, B.J. (1977). Two-dimensional separation of the prolamins of normal and high-lysine barley (Hordeum vulgare L.). J. Exp. Bot. 28 : 597.
- Shewry, P.R., Pratt, H.M. and Miflin, B.J. (1978a). Varietal identification of single seeds of barley by analysis of hordein polypeptides. J. Sci. Food Agric. 29 : 587.
- Shewry, P.R., Ellis, J.R., Pratt, N.M. and Miflin, B.J. (1978b). Comparison of methods for the extraction and separation of hordein fractions from 29 barley varieties. J. Sci. Food Agric. 29 : 433.
- Shewry, P.R., Autrau, J.C., Nirumo, C.C., Lew, E.J.L. and Kasarda, D.D. (1980). N-terminal amino acid sequence homology of storage protein components from barley and a diploid wheat. Nature (London) 286 : 520.
- Simon, M. and Viron, J.P. (1975). Identification et controle de la purete varietale Espece 'ble tendre' - (Triticum aestivum). Seed Sci. Technol. 3 : 186.
- Singh, R. and Lal, G. (1990). Effect of varieties and harvesting stages on field and quality of tomato seed (Lycopersicon esculentum Mill.). Abstracts. International Conference on Seed Science and Technology, Feb 21-25, 1990, N. Delhi. Organised by Indian Society of Seed Technology, New Delhi, p. 19.

- Smith, D.B. and Simpson, P.A. (1983). Relationships of barley proteins soluble in SDS to malting quality and varietal identification. Journal of Cereal Sci. 1 : 185.
- Soave, C., Righetti, P.G., Lorenzoni, C., Gentinetta, E. and Salamini, F. (1976). Expressivity of the opaque - 2 gene at the level of zein molecular components. Maydica 21 : 61.
- Soueges, E.C.R. (1907). Development et structure du tegument chez les Solanacees. Annls. Sci. nat. Bot., ser 9 (cited from Fahn, 1982).
- Srivastava, A.K. and Singh, G. (1975). Ecology of germination of wheat and triticale seeds in relation to temperature and moisture stress. Indian J. Ecol. 2 : 132.
- Stahl, C. (1964). Beginning and development of variety tests. Proceedings of the International Seed Testing Association, 29 : 763.
- Stegemann, H., El-Tabey Shehate, A. and Hamza, M. (1980). Broad bean proteins (Vicia faba L.). Electrophoretic studies on seed of some German and Egyptian cultivars. Zeitschrift fur Acker-und Pflanzenbau 149 : 447.
- Steinberger, J. (1971). Klassifikation und Identification in Osterreich Zugelassener Gerstensorten (Hordeum vulgare L.). Jahrbuch 1971 der Bundesanstalt fur Pflanzenbau und Samenprufung in Wien p. 172.
- Steinberger, J. (1975). Die Sortenunterscheidung von Hafer (Avena sativa L.). Seed Sci. Technol. 3 : 170.
- Stevens, M.A. and Rick, C.M. (1986). Genetics and breeding. In : The Tomato Crop. J.G. Atherton and J. Rudich (Eds.). Chapman and Hall Ltd., London, p. 35.
- Subbiah, B.V. and Asija, G.L. (1956). A rapid procedure for the determination of available nitrogen in soils. Curr. Sci. 25 : 259.
- Sun, S.M., McLeester, R.C., Bliso, F.A. and Hall, T.C. (1974). J. Biol. Chem. 249 : 2118 (cited from Brown et al., 1982).
- Sun, S.M., Mutschler, M.a., Bliss, F.A. and Hall, T.C. (1978). Protein synthesis and accumulation in bean cotyledons during growth. Plant Physiol. 61 : 918.
- \* Taha, S.m., El-Betagy, A.S., Hassan, S.M., Gomaa, H.M. and Makson, M.A. (1984). Response to some tomato varieties to water stress during germination and seedling stage. Ann. Agril. Sci. Ain Shamo University 29 : 91.
- Taylor, A.G., Motes, J.E. and Kirkhoun, M.B. (1982). Germination and seedling growth characteristics of three tomato species affected by water deficits. J. Amer. Soc. Hort. Sci. 107 : 282.
- Taylor, I.B. (1986). Biosystematics of tomato. In : The Tomato Crop. J.G. Atherton and J.G. Rudich (Eds.). Chapman and Hall Ltd., London.
- Taylor, J.R.N. and Schusoler, L. (1984). Sorghum cultivars verification by electrophoresis. J. Sci. Food Agric. 35 : 1.
- Thanh, V.H. and Shibasaki, K. (1978). J. Agric. Food Chem. 26 : 692 (cited from Brown et al., 1982).
- \* Sykes, G.E. and Gayler, K.R. (1981). Arch. Biochem. Biophys. 210 : 525 (Cited from Brown et al., 1982).

- Thomson, J.R. (1971). Proceedings of International Seed Testing Association 36 : 348.
- Thomson, J.A. and Doll, H. (1979). In : Seed Protein Improvement in Cereals and Grain Legumes, Vol. I, IAEA, Vienna, p. 109.
- Thomson, J.A. and Schroeder, H.E. (1978). Cotyledon storage proteins in Pisum sativum. II. Hereditary variation in compounds of the legumin and Vicilin fraction. Aust J. Plant Physiol. 5 : 281.
- Thomson, J.A., Schroeder, H.E. and Tassie, A.M. (1980). Aust. J. Plant Physiol. 7 : 271 (cited from Brown et al., 1982).
- Tillge, L. (1984). Variety identification in Lactuca sativa L. Seed Sci. Technol. 12 : 919.
- Ting, T. and Fang, Y.H. (1957). A preliminary investigation on salt tolerance of rice plants. Acta Bot. sin. 6 (2) : 91.
- Tsai, C.Y., Larkins, B.A. and Glover, D.V. (1978). Biochem. Genet. 16 : 883 (cited from Brown et al., 1982).
- Tuning, B. and Wilten, W. (1978). Het herkennen van gerstrassen in partijen gerst. Voedingsmiddelentechnologie 11(16) : 10.
- Uchimiya, H., Chen, K. and Wildman, S.G. (1979). Genetic behaviour of information coding for the small subunit polypeptides of Lycopersicon fraction I protein. Plant Sci. Lett. 17 : 63.
- Ulvinen, O., Voss, A., Backgaard, H.C. and Terning, P.R. (1973). Testing for genuineness of cultivar. Handbook of Seed Testing ISTA, Ao, Norway, p. 112.
- United States Salinity Laboratory Staff (USSLS) (1954). Diagnosis and Improvement of Saline Alkaline Soils. Oxford & IBH, New Delhi.
- UPOV (1980a) List of test guidelines already published. Newsletter of International Union for the Protection of New Varieties of Plants, Geneva 21 : 18.
- UPOV (1980b). Revised general introduction to the guidelines for the conduct of tests for distinctness, homogeneity and stability of new varieties of plants. Newsletter of International Union for the Protection of New Varieties of Plants., Geneva 22 : 2.
- UPOV (1981). Publications by the office of the union. Newsletter of the International Union for the Protection of New Varieties of Plants, Geneva 26 : 20.
- UPOV (1982). Test guidelines. Plant variety protection. Newsletter of International Union for the Protection of New Varieties of Plants, Geneva 28 : 40.
- Verma, O.P.S. and Yadava, R.B.R. (1986) Salt tolerance of some oats (Avena sativa L.) varieties at germination and seedling stage. J. Agron. Crop. Sci. 156 : 123.
- Vitale, A., Soave, C. and Galante, E. (1980). Plant Sci. Lett. 18 : 57 (cited from Brown et al., 1982).
- Wehner, D.J., Duich, J.M. and Watschke, T.L. (1976). Separation of kentucky bluegrass cultivars using peroxidase isoenzyme banding patterns. Crop. Sci. 16 : 475.



- Woychik, J.H., Huebner, F.R. and Dimler, R.J. (1964). Reduction and starch-gel electrophoresis of wheat gliadin and glutenin. Arch. Biochem. Biophys. 105 : 151.
- Wrigley, C.W. (1976). Single-seed identification of wheat varieties : use of grain handness testing, electrophoretic analysis and a rapid test paper for phenol reaction. J. Sci. Food Agric. 27 : 429.
- Wrigley, C.W. and Baxter, R.I. (1974). Identification of Australian wheat cultivars by laboratory procedures : grain samples containing a mixture of cultivars. Australian Journal of Experimental Agriculture and Animal Husbandry 14 (71) : 805..
- Wrigley, C.W. and Shephard, K.W. (1974). Identification of Australian wheat cultivars by laboratory procedures. Examination of pure samples of grain. Australian Journal of Experimental Agriculture and Animal Husbandry 14 (71) : 796.
- Wagner, C.K. and MacDonald, M.B. (1982). Rapid laboratory tests useful for differentiation of soybean (Glycine max) cultivars. Seed Sci. Technol. 10 : 431.
- Yaseen, B.T., Mohammad, H.A. and Sulaiman, E.D. (1987). Growth of prophyll and proline accumulation due to salt stress in three barley cultivars. Iraqi Journal of Agricultural Sciences "Zanco". 5(2) : 155.
- Yunuskhonov, S.H., Alimukhamedov, S.S., Egambardye, V.A.E., Sadykov, A.S. and Ibragimov, A.P. (1981). Study of protein markers in the cotton Gosypium hirsutum and Gossypium barbadense. Referativnyi Zhurnal 7 : 65 [Plant Breeding Abstract (1982), 52 : 131].
- Zhou, C.J., Yen, Y.L. and Dai, Y.Q. (1984). Comparative analysis of seed storage proteins in Phaseolus beans. Acta Agriculturae Universitatis Pekinensis 10(3) : 293.
- Zoschke, M. (1973). Fortschr. Aker-u Pflbau 2, 1 (cited from Byers et al., 1978).
- Zwadzka, M. (1976). Salt tolerance of grasses and leguminous plants. Acta Agrobotanica 29 : 85.
- Zwartz, J.A. (1966). Potato varieties and their protein electrophoregram characteristics. Eur. Potato. J. 9 : 111.