## References

- Adair, C.R., Bollich, C.N., Bowman, D.H., Jodon, N.E., Johnston, T.H., Webb, B.D., and Atkins, J.G. 1973. Rice breeding and testing methods in the United States. *In Rice in the United States: Varieties and Production.* US Dep. Agri. Handbook 289 (revised edition), pp. 22-75.
- Andrianilana, F., Rasolo, F., Pokatonjanahary, R., Flinn, J.C., Shahi, B.B., and Perez, C.M. 1987. *Rice quality and prices in Madagascar*. National Center for Applied Research in Rural Development, Ministry of Agriculture and Rural Development, Madagascar, and International Rice Research Institute, Manila, Philippines.
- Anonymous. 1985. Rice cultivar withdrawn. Int. Agri. Development 5: 5.
- Asano, H., Hirano, F., Isobe, K., and Sakurai, H. 2000. Effect of harvest time on the protein composition (glutelin, prolamin, albumin) and amylose content in paddy rice cultivated by Aigamo duck farming system. *Japanese J. Crop Sci.* 69: 320-323.
- Attaviriyasook, K. 1983. Survey of rice quality on farms in central Thailand. *In* Teter, N. C. *et al.*, eds. *Maintaining Good Grain Quality*. Puncek Pass, Bogor, Indonesia, pp. 39-48.
- Azhakanandam, K., Power, J.B., and Lowe, K.C. 2000. Qualitative assessment of aromatic Indica rice *Oryza sativa* L. Proteins, lipids and starch in grain from somatic embryo- and seed-derived plants. *J. Plant Physiol.* 156: 783-789.
- Barlow, K.K., Buttrose, M.S., Simmonds, D.H., and Vesk, M. 1973. The nature of the starch-protein interface in wheat endosperm. *Cereal Chem.* 50: 443-454.

- Basak, S., Tyagi, R.S., and Srivastava, K.N. 2002. Biochemical characterization of aromatic and non-aromatic rice cultivars. *J. Food Sci. Tech. Mysore* 39: 55-58.
- Bechtel, D.B., and Juliano, B.O. 1980. Formation of protein bodies in the starchy endosperm of rice (*Oryza sativa* L.): a reinvestigation. *Ann. Bot.* 45: 503-509.
- Berrio, L.E., and Cuevas-Perez, F.E. 1989. Cultivar differences in milling yields under delayed harvesting of rice. *Crop Sci.* 29: 1510-1512.
- Blakeney, A.B. 1996. Rice. *In* Henry, R. J. and Kettlewell, P. S., eds. *Cereal Grain Quality*. Chapman and Hall, London, pp. 55-76.
- Bocchi, S., Sparaciono, A.C., Sciorati, F., and Tava, A. 1997. Effect of management practices on aromatic quality of rice. *Info. Agrario* 53: 60-62.
- Borrell, A.K., Garside, A.L., Fukai, S., and Reid, D.J. 1999. Grain quality of flooded rice is affected by season, nitrogen rate, and plant type. *Aus. J. Agri. Res.* 50: 1399-1408.
- 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.
- Brorsen, B.W., Grant, W.R., and Rister, M.E. 1984. Economic Values of Rice Quality Factors. Texas. Agri. Exp. Sta. Prog. Report 4202.
- Butterly, R.G., Juliano, B.O., and Ling, L.C. 1983a. Identification of rice aroma compound 2-acetyl-1-pyrroline in pandan leaves. *Chem. Industrial (Lond.)* 23: 478-479.
- Butterly, R.G., Ling, L.C., Juliano, B.O., and Turnbaugh, J.G. 1983b. Cooked rice aroma and 2-acetyl-1-pyrroline. *J. Agri. Food Chem.* 24: 1589-1594.

- Cagampang, G.B., Cruz, L.J., Espiritu, S.G., Santiago, R.G., and Juliano, B.O. 1966. Studies on the extraction and composition of rice proteins. *Cereal Chem.* 43: 145-155.
- Calderwood, D.L., Bollich, C.N., and Scott, J.E. 1980. Field drying of rough rice: effect on grain yield, milling quality, and energy saved. *Agron. J.* 72: 649-653.
- Canellas, L.P., Santos, G.A., and Merchezan, E. 1997. Effect of management practices on yield and commercial quality of grains of irrigated rice. *Ciencia Rural* 27: 375-379.
- Cheaney, R.L., and Wyche, R.H. 1955. Effect of fertilization on the milling quality of rice. Texas Agri. Exp. Sta. Texas A and M College System Prog. Report 1748.
- Damardjati, D.S., and Made, O.A. 1989. Evaluation of rice quality characteristics preferred by Indonesian urban consumers. *In* Naewbanij, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 117-197.
- De Datta, S.K. 1986. Improving nitrogen fertilizer efficiency in lowland rice in tropical Asia. *Fertilizer Res.* 9: 171-186.
- De Datta, S.K., Obcemea, W.N., and Jana, R.K. 1972. Protein concentration of rice grain as affected by nitrogen fertilizer and some triazines and substituted ureas. *Agron. J.* 64: 785-788.
- del Rosario, A.R., Briones, V.P., Vidal, A.J., and Juliano, B.O. 1968. Composition and endosperm structure of developing and mature rice kernel. *Cereal Chem.* 45: 225-235.

- Dela Cruz, N.M., and Khush, G.S. 2000. *Rice grain quality evaluation procedures*.

  Oxford and IBH Publishing, New Delhi.
- Dilday, R.H. 1989. Milling quality of rice: cylinder speed vs. grain-moisture content at harvest. *Crop Sci.* 29: 1532-1535.
- Directorate of Food Crops Economic. 1988. Supply and Demand for Food Crops., Mimeo.
- Ebata, M., and Nagota, K. 1967. Ripening conditions and grain characteristics. *Int. Rice Comm. Newsletter (special issue)*: 10-17.
- Echeverria, E., Boyer, C.D., Thomas, P.A., Liu, K.C., and Shannon, J.C. 1988.

  Enzyme activities associated with maize kernel amyloplasts. *Plant Physiol*. 86: 786-792.
- Efferson, J.N. 1985. Rice quality in world markets. Chap. in Rice Grain Quality and Marketing. *In*. International Rice Research Institute, Manila, Philippines, pp. 1-13.
- Eggum, B.O., and Juliano, B.O. 1973. Nitrogen balance in rats fed rices differing in protein content. *J. Sci. Food Agri.* 24: 921-927.
- Fagade, S.O., and Ojo, A.A. 1977. Influence of plant density and nitrogen on yield and milling quality of lowland rice in Nigeria. *Expl. Agri.* 13: 17-24.
- FAO. 1984. Data blank. FAO, Rome. Cited in Technical Advisory Committee, 1986.

  Review of CGIAR Priorities and Future Strategies, edited version.

  Consultative Group on International Agricultural Research, Washington, D.C.
- Gomez, K.A., and De Datta, S.K. 1975. Influence of environment on protein concentration of rice. *Agron. J.* 67: 565-568.

- Greenblatt, G.A., Bettge, A.D., and Morris, C.F. 1995. Relationship between endosperm texture and the occurrence of friabilin and bound polar lipids on wheat starch. *Cereal Chem.* 72: 172–176.
- Greenwell, P., and Schofield, J.D. 1986. A starch granule protein associated with endosperm softness in wheat. *Cereal Chem.* 38: 379–380.
- Harris, N., and Juliano, B.O. 1977. Ultrastructure of endosperm protein bodies in developing rice grains differing in protein content. *Ann. Bot.* 41: 1-5.
- Henderson, S.M. 1954. The causes and characteristic of rice checking. *Rice J.* 57: 16-18.
- Hinton, J.J.C. 1948. The distribution of vitamin B<sub>1</sub> in the rice grain. *Br. J. Nutr.* 2: 237-241.
- Hoshikawa, K. 1967a. Studies on the development of endosperm in rice. 1. Process of endosperm tissue formation. *Proc. Crop Sci. Soc. Japan* 36: 151-161. (in Japanese)
- Hoshikawa, K. 1967b. Studies on the development of endosperm in rice. 4. Differentiation and development of the aleurone layer. *Proc. Crop Sci. Japan* 36: 216-220. (in Japanese)
- Hoshikawa, K. 1968a. Studies on the development of endosperm in rice. 9. The size and shape of endosperm and number of endosperm cells in the foreign rice varieties. *Proc. Crop Sci. Soc. Japan* 37: 87-96. (in Japanese)
- Hoshikawa, K. 1968b. Studies on the development of endosperm in rice. 11.

  Development of starch granules in the endosperm tissue. *Proc. Crop Sci. Soc. Japan* 37: 207-216. (in Japanese)

- Hoshikawa, K. 1972. Anatomical and developmental studies of the rice endosperm tissue. *Biological Sci.* 23: 66-76. (in Japanese).
- Hoshikawa, K. 1973. Morphogenesis of endosperm tissue in rice. JARQ 7: 153-159.
- Hoshikawa, K. 1975a. Anatomical Illustrations on the Rice Growth (Kaibo zusetsu: Ine no seicho). Nobunkyo, Tokyo. (in Japanese)
- Hoshikawa, K. 1975b. Ripening. *In Anatomical Illustrations on the Rice Growth*(Kaibo zusetsu: Ine no seicho), Nobunkyo, Tokyo, pp. 263-295. (in Japanese)
- Hoshikawa, K. 1993. Anthesis, fertilization and development of caryopsis. *In* Matsuo, T. and Hoshikawa, K., eds. *Science of Rice Plant: I. Morphology*. Ministry of Agriculture, Forestry and Fisheries, Tokyo, Japan, pp. 339-376.
- Houston, D.F., Iwasaki, T., Mohammad, A., and Chen, L. 1968. Radial distribution of protein by solubility classes in the milled rice kernel. *J. Agri. Food Chem.* 16: 720-724.
- Huysmans, A.A. 1965. Milling quality of paddy as influenced by timing of harvest. *Int. Rice Comm. Newsletter* 14: 4-12.
- IFPI. 1999. World Food Prospects: Critical Issue for the Early Twenty-first Century. Washington, D.C.
- Ikehashi, H., and Khush, G.S. 1979. Proceeding Workshop on Chemical Aspects of Rice Grain Quality. International Rice Research Institute, Los Banos, Philippines.
- IRRI. 1964. Annual report for 1963, pp. 149-161, Los Banos, Manila, Philippines.
- IRRI. 1986. Annual report for 1985., Los Banos, Manila, Philippines.
- IRRI. 1987. Annual report for 1986., Los Banos, Manila, Philippines.

- Islam, N., Inanaga, S., Chishaki, N., and Horiguchi, T. 1996. Effect of N top-dressing on protein content in japonica and indica rice grains. *Cereal Chem.* 73: 571-573.
- Itani, T., Tamaki, M., Aria, E., and Horino, T. 2002. Distribution of amylose, nitrogen, and minerals in rice kernels with various characters. *J. Agri. Food Chem.* 50: 5326-5332.
- Japanese Food Agency. 1998. *Rice inspection technology*. The Food Agency, Ministry of Agriculture, Forestry and Fisheries, Japan. (In Japanese)
- Jennings, P.R., Coffman, W.R., and Kauffman, H.E. 1979. *Rice Improvement*. IRRI, Los Banos, Philippines.
- Jongkaewwattana, S. 1990. A Comprehensive Study of Factors Influencing Rice (Oryza sativa L.) Milling Quality. Ph.D. Thesis, University of California, Davis.
- Jongkaewwattana, S., Geng, S., Brandon, D.M., and Hill, J.E. 1993. Effect of nitrogen and harvest grain moisture on head rice yield. *Agron. J.* 85: 1143-1146.
- Juliano, B.O. 1972. Physicochemical properties of starch and protein in relation to grain quality and nutrition value of rice. *In Rice Breeding*. IRRI, Manila, Philippines, pp. 389-404.
- Juliano, B.O. 1979. The chemical basis of rice grain quality. *In Chemical Aspects of Rice Grain Quality*. IRRI, Los Banos, Philippines: 69-90.
- Juliano, B.O., (ed.) 1985a. Rice: Chemistry and Technology. American Association of Cereal Chemists, Minnesota, USA.
- Juliano, B.O. 1985b. Factors affecting nutritional properties of rice protein. *Trans. National Academic Sci. Tech. (Philippines)* 7: 205-216.

- Juliano, B.O., (ed.) 1993. *Rice in Human Nutrition*. FAO Food and Nutrition Series, Rome, Italy.
- Juliano, B.O., and Boulter, D. 1976. Extraction and composition of rice endosperm glutilin. *Phytochemistry* 15: 1601-1606.
- Juliano, B.O., and Bechtel, D.B. 1985. The rice grain and its gross composition. *In*Juliano, B. O., ed. *Rice: Chemistry and Technology*. The American

  Association of Cereal Chemists, Minnesota, USA, pp. 17-58.
- Juliano, B.O., and Perez, C.M. 1986. Kinetic studies on cooking of tropical milled rice. *Food Chem.* 20: 97-105.
- Juliano, B.O., and Duff, B. 1989. Setting priorities for rice grain quality research. In Naewbanij, J. O., ed. Grain Postharvest Research and Development:Priorities for the Nineties, Surabaya, Indonesia, pp. 201-211.
- Juliano, B.O., and Gonzales, L.G. 1989. Physicochemical and economic aspects of rice grain quality. *In Progress in Irrigated Rice Research*. IRRI, Manila, Philippines, pp. 275-290.
- Juliano, B.O., and Villareal, C.P., (eds.) 1993. *Grain Quality Evaluation of World Rices*. IRRI, Los Banos, Philippines.
- Juliano, B.O., Onate, L.U., and del Mundo, A.M. 1965. Relation of starch composition, protein contents and gelatinization temperature to cooking and eating qualities of milled rice. *Food Tech.* 19: 1006-1011.
- Juliano, B.O., Antonio, A.A., and Esmama, B.V. 1973. Effects of protein content on the distribution and properties of rice protein. *J. Sci. Food Agri.* 24: 295-306.

- Juliano, B.O., Perez, C.M., Maranan, C.L., Abansi, C.L., and Duff, B. 1989. Grain quality characteristics of rice in Philippine retail markets. *In* Naewbanij, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 256-267.
- Kaosa-ard, M., and Juliano, B.O. 1989. Assessing quality characteristics of rice in selected international markets. *In* Naewbanij, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 351-371.
- Kavakli, I.H., Slattery, C.J., Ito, H., and Okita, T.W. 2000. The conversion of carbon and nitrogen into starch and storage proteins in developing storage organs: an overview. *Aus. J. Plant Physiol.* 27: 561-570.
- Kawahara, H., Matsuda, T., and chonan, N. 1977. Studies on morphogenesis in rice plant. X. Ultrastructure of the dorsal vascular bundle in the ovary and a transport mechanism. *Nippon Sakumotsu Gakkai Kiji* 46: 91-96.
- Khush, G.S., and Juliano, B.O. 1984. Rice varietal improvement for protein content at the International Rice Research Institute. *In Cereal Grain Protein Improvement*. International Atomic Energy Agency, Vienna, pp. 199-202.
- Khush, G.S., Paule, C.M., and Dela Cruz, N.M. 1979. Rice grain quality evaluation and improvement at IRRI. *In Chemical Aspects of Rice Grain Quality*. IRRI, Los Banos, Philipines: 21-31.
- Kunze, O.R., and Prasad, S. 1978. Grain fissuring potentials in harvesting and drying of rice. *Trans. ASAE* 21: 361-366.

- Lisle, A.J., Martin, M., and Fitzgerald, M.A. 2000. Chalky and translucent rice grains differ in starch composition and structure and cooking properties. *Cereal Chem.* 77: 627-632.
- Little, R.R., and Dawson, E.H. 1960. Histology and histochemistry of raw and cooked rice kernels. *Food Res.* 25: 611-622.
- Little, R.R., Hilder, G.B., and Dawson, E.H. 1958. Differential effect of dilute alkali on 25 varieties of milled white rice. *Cereal Chem.* 35: 111-126.
- Luthe, D.S. 1983. Storage protein accumulation in developing rice (*Oryza sativa* L.) seeds. *Plant Sci. Lett.* 32: 147-158.
- Made, O.A., Damardjati, D.S., and Tabor, S.S. 1989. Socio-economic evaluation of rough and milled rice quality assessment at commercial mills level in west Java. *In Naewbanij*, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 177-197.
- Mann, R.F. 1987. Basmati rice: Wonder of Pakisatan's agriculture. *IRRC Newsletter* XXXVI: 23-28.
- Maranan, C.L., Duff, B., and Juliano, B.O. 1989. Quality preferences for modern and traditional rice at the retail level: the Philippine case. *In* Naewbanij, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 230-255.
- Matsuo, T., and Hoshikawa, K., (eds.) 1993. Science of the Rice Plant: I.

  Morphology. Ministry of Agriculture, Forestry and Fisheries, Japan.
- Matsuo, T., Kumazawa, K., Ishii, R., Ishihara, K., and Hirata, H., (eds.) 1995. *Science of the Rice Plant: II. Physiology*. Ministry of Agriculture, Forestry and Fisheries, Japan.

- McNeal, X. 1950. Rice storage: Effect of moisture, temperature and time on grade, germination and head rice yield. *In Akansas Agri. Exp. Stn. Bull.* 621, pp. 23.
- Ministry of Commerce Thailand. 2001. Notification of the Ministry of Commerce:

  Prescribing Thai Hom Mali Rice as a standardized commodity and the standards of Thai Hom Mali Rice, B.E. 2544. *In Government Gazette*. 118, Special Part 109, pp.
- Mores, M.D., Lindt, J.M., Oelke, E.A., Brandon, M.D., and Curley, R.G. 1968. The effect of grain moisture at the time of harvest on grain yield and milling quality. *Rice Res. California*: 7-8.
- Murata, T., and Akazawa, T. 1966. Enzymic mechanisms of starch synthesis in ripening rice grains. 4. Starch synthesis in glutinous rice grains. *Arch. Biochemic. Biophys.* 114: 76-87.
- Murata, T., Sugiyama, T., and Akazawa, T. 1964. Enzymic mechanisms of starch synthesis in ripening rice grains. 2. Adenosine diphosphate glucose pathway. *Arch. Biochemic. Biophys.* 107: 92-101.
- Murata, T., Sugiyama, T., Minamikawa, T., and Akazawa, T. 1966. Enzymic mechanisms of starch synthesis in ripening rice grains. 3. Mechanisms of the sucrose-starch conversion. *Arch. Biochemic. Biophys.* 114: 34-44.
- Nanda, J.S., and Coffman, W.R. 1979. IRRI's efforts to improve the protein content of rice. *In Chemical Aspects of Rice Grain Quality. Rice Grain Research*. IRRI, Los Banos, Philippines: 33-47.
- Nangju, D., and De Datta, S.K. 1970. Effect of time of harvest and nitrogen level on yield and grain breakage in transplanted rice. *Agron. J.* 62: 468-474.

- Nishizawa, N., Kitahara, I., Noguchi, T., Hareyama, S., and Honjyo, K. 1977. Protein quality of high protein rice obtain by spraying urea on leaves before harvest. *Agri. Biol. Chem.* 41: 477-485.
- Office of Agricultural Economics. 2002. Export quantity and value of agricultural products [Online]. Available: <a href="http://www.oae.go.th/statistic/export">http://www.oae.go.th/statistic/export</a> (10 June).
- Ogawa, M., Kumamaru, T., Satoh, H., Iwata, N., Omurs, T., Kasai, Z., and Tanaka, K.

  1987. Purification of protein body-I of rice seed and its polypeptide composition. *Plant Cell Physiol.* 28: 1517-1527.
- Oka, H.I. 1988. Origin of Cultivated Rice. Scientific Societies Press, Tokyo, Japan.
- Oparka, K.J., and Gates, P.J. 1981. Transport of assimilates in the developing caryopsis of rice (*Oryza sativa* L.). Ultrastructure of the pericarp vascular bundle and its connections with the aleurone layer. *Planta* 151: 561-573.
- Patnaik, S., and Broadbent, F.E. 1967. Utilization of tracer nitrogen by rice in relation to time of application. *Agron. J.* 59: 287-288.
- Patrick, R.M., and Hoskins, F.H. 1974. Protein and amino acid content of rice as affected by application of nitrogen fertilizer. *Cereal Chem.* 51: 84-95.
- Peng, S., Garcia, F.V., Laza, R.C., Sanico, A.L., Visperas, R.M., and Cassman, K.G. 1996. Increased N-use efficiency using a chlorophyll meter on high-yielding irrigated rice. *Field Crops Res.* 47: 243-252.
- Perez, C.M., Juliano, B.O., Liboon, S.P., Alcantara, J.M., and Cassman, K.G. 1996. Effects of late nitrogen fertilizer application on head rice yield, protein content, and grain quality of rice. *Cereal Chem.* 73: 556-560.

- Place, G.A., Sims, J.L., and Hall, V.L. 1970. Effect of nitrogen and phosphorus fertilization on growth, yield, and cooking characteristics of rice. *Agron. J.* 62: 239-243.
- Pomeranz, Y. 1977. Structure and composition of the rice kernel. *In* Barber, S. *et al.*, eds. *Rice Report 1976*. Instituto de Agroquimica y Tecnologia de Alimentos, Valencia, Spain, pp. 142-144.
- Pomeranz, Y., Youngs, V.L., and Robbins, G.S. 1973. Protein content and amino acid composition of oat species and tissues. *Cereal Chem.* 50: 702-707.
- Reddy, R.N.S., and Hussaini, S.M. 1984. Milling quality of rice influenced by the schedules of late irrigation and irrigation levels. *Indian J. Agron.* 29: 133-134.
- Resurreccion, A.P., Juliano, B.O., and Tanaka, Y. 1979. Nutrient content and distribution in milling fractions of rice grain. *J. Sci. Food Agri.* 30: 475-481.
- Rohilla, R., Singh, V.P., Singh, U.S., Singh, R.K., and Khush, G.S. 2000. Crop husbandry and environmental factors affecting aroma and other quality traits. *In* Singh, R. K. *et al.*, eds. *Aromatic Rices*. Oxford & IBH Publishing, New Delhi, pp. 201-216.
- Sarkarung, S., Somrith, B., and Chitrakorn, S. 2000. Aromatic rice of Thailand. *In*Singh, R. K. *et al.*, eds. *Aromatic Rices*. Oxford & IBH Publishing, New
  Dalhi, pp. 180-183.
- Sato, K. 1964. Studies on starch contained in the tissues of rice plant. X. Starch distribution in tissues of flower and caryopsis with their development of growth. *Nippon Sakumotsu Gakkai Kiji* 33: 29-34.

- Seetanun, W., and De Datta, S.K. 1973. Grain yield, milling quality and seed viability of rice as influenced by time of nitrogen application and time of harvest. *Agron. J.* 65: 390-394.
- Shotwell, M.A., and Larkins, B.A. 1989. The molecular biology and biochemistry of seed storage proteins. *In* Marcus, A., ed. *The Biochemistry of Plants*. 15. Acad Press, San Diago, CA, pp. 297-345.
- Simpson, J.E., Adair, C.R., Kohker, G.O., Dawson, E.H., Deobald, H.J., Kester, E.B., Hogan, J.T., Batcher, O.M., and Halick, J.V. 1965. Quality evaluation studies of foreign and domestic rices. II. Methods and procedures-physical measurements. *US Dep. Agri. Tech. Bull. 1331*: 2-9.
- Sims, J.L., Hall, V.L., and Johnston, T.H. 1967. Timing of N fertilization of rice. I. Effect of applications near midseason on varietal performance. *Agron. J.* 59: 63-66.
- Singh, R., and Juliano, B.O. 1977. Free sugars in relation to starch accumulation in developing rice grains. *Plant Physiol.* 59: 417-421.
- Singh, R.K., Singh, U.S., and Khush, G.S. 1988. Indian indigenous aromatic rices. *Indian Farming* XXI: 1-6.
- Singh, R.K., Singh, U.S., Khush, G.S., and Rohilla, R. 2000. Genetics and biochemistry of aroma in scented rice. *In* Singh, R. K. *et al.*, eds. *Aromatic Rices*. Oxford & IBH Publishing, New Delhi, pp. 47-70.
- Smith, W.D., Deffes, J.J., Bennett, C.H., Adair, R.C., and Beachell, H.M. 1983. Effect of date of harvest on yield and milling quality of rice. *In USDA Circularity No. 484*. US Government Print. Office, Washington, D.C, pp.

- Sriswadilek, J., Kongseree, N., and Attaviriyasook, K. 1989. Rice grain characteristics affecting retail price in Thailand. *In* Naewbanij, J. O., ed. *Grain Postharvest Research and Development: Priorities for the Nineties*, Surabaya, Indonesia, pp. 312-331.
- Stenvert, N.L., and Kingswood, K. 1977. The influence of the physical structure of the protein matrix on wheat hardness. *J. Sci. Food Agri.* 28: 11-19.
- Suwanarit, A., Kreetapiporn, S., Buranakarn, S., Varanyanond, W., Tungtrakul, P., Somboonpong, S., Rattapat, S., and Pornurisnit, P. 1996. Effect of nitrogen fertilizer on grain quality of Khao Dawk Mali-105 rice. *Kasetsart J. Nat. Sci.* 30: 458-474.
- Suwanarit, A., Somchai, K., Suparb, B., Warumee, V., Patcharee, T., Songsak, R., Songchai, W., Kunnika, N., Sawang, R., and Pituk, P. 1997. Effect of phosphorus fertilizer on grain quality of Khao Dawk Mali-105 rice. *Kasetsart J. Nat. Sci.* 31: 36-50.
- Taira, H. 1970. Effect of fertilizer on protein content in high yield rice. Nippon Sakumotsu Gakkai Kiji 39: 200-203.
- Takabe, M., and Yoneyama, T. 1989. Measurement of leaf color scores and its implication to nitrogen nutrition of rice plants. *JARQ* 23: 86-93.
- Tanaka, K., Kasai, Z., and Ogawa, M. 1995. Physiology of ripening. *In Matsuo*, T. *et al.*, eds. *Science of the Rice Plant II: Physiology*. Food and Agriculture Policy Research Center, Tokyo, pp. 97-118.
- Tanaka, K., Sugimoto, T., Ogawa, M., and Kasai, Z. 1980. Isolation and characterization of two types of protein bodies in the rice endosperm. *Agri. Biol. Chem.* 44: 1633-1639.

- Tsuzuki, E., Tanaka, K., and Shida, S. 1981. Studies on the characteristics of scented rice. *In Bulletin of Faculty of Agriculture Vol.* 28. Miyazaki University, pp. 31-37.
- Unmevehr, L.J., Juliano, B.O., Perez, C.M., and Marciano, E.B. 1985. Consumer demand for rice grain quality in Thailand, Indonesia and the Philippines. IRRI, Manila, Philippines.
- Unnevehr, L.J., Duff, B., and Juliano, B.O. 1992. *Consumer Demand for Rice Grain Quality*. IRRI, Manila, Philippines.
- USDA. 1995. United States Standards for Milled Rice. Agricultural Marketing Service, U.S. Department of Agriculture, Washington DC.
- Villareal, R.M., and Juliano, B.O. 1978. Properties of glutelin from mature and developing rice grain. *Phytochemistry* 17: 177-182.
- Webb, B.C., Bollich, C.N., Johnston, T.H., and McIlrath, W.O. 1979. Components of rice quality: their identification, methodology, and stage of application in United States breeding programs. *In Chemical Aspects of Rice Grain Quality*. IRRI, Los Banos, Philippines: 191-205.
- Webb, B.D., Bollich, C.N., Adair, C.R., and Johnston, T.H. 1968. Characteristics of rice varieties in the US. department of agriculture collection. *Crop Sci.* 8: 361-365.
- Wells, B.R., and Johnston, T.H. 1970. Differential response of rice varieties to timing of mid-season nitrogen applications. *Agron. J.* 62: 608-612.
- Wopereis-Pura, M.M., Watanabe, H., Moreira, J., and Wopereis, M.C. 2002. Effect of late nitrogen application on rice yield, grain quality and profitability in the Senegal River valley. *Euro. J. Agron.* 17: 191-198.

- Yamagata, H., and Tanaka, K. 1986. The site of synthesis and accumulation of rice storage proteins. *Plant Cell Physiol.* 27: 135-145.
- Yamakata, H., Sugimoto, T., Tanaka, K., and Kasai, Z. 1982. Biosynthesis of storage proteins in developing rice seeds. *Plant Physiol.* 70: 1094-1100.
- Yoshida, S., (ed.) 1981. Fundamentals of Rice Crop Science. IRRI, Los Banos, Philippines.
- Yoshida, S., Forno, D.A., H, C.J., and Gomez, K.A. 1976. *Laboratory Manual for Physiological Studies of Rice*. 3rd ed. IRRI, Los Banos, Philippines.
- Zhou, Z., Robards, K., Helliwell, S., and Blanchard, C. 2002. Composition and functional properties of rice. *Int. J. Food Sci. Tech.* 37: 849-868.

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