

REFERENCES

- Akemind, M. 1914. Ueber das bluken des reises und einige sich anknupfende erschernungen. *Z. Pflanzenzucht.* 2: 339-375.
- Aljanabi, S.M., and I. Martinez. 1997. Universal and rapid salt-extraction of high quality genomic DNA for PCR based techniques. *Nucleic Acids Res.* 25: 4692-4693.
- Amonsilya, S. 1978. Comparison of rice hybridization methods. *Agri Sci.* 11: 129-137.
- Athwal, D.S., and S.S. Virmani. 1972. Cytoplasmic male sterility and hybrid breeding in rice. pp. 615-620. *In: Rice breeding.* International Rice Research Institute, Los Banos, Philippines.
- Bartlett, J.M., and D. Stirling. 2003. A short history of the polymerase chain reaction. *Methods Mol Biol.* 226: 3-6.
- Beachell, H.M., C.R. Adair, N.E. Jodon, L.L. Davis, and J.W. Jones. 1938. Extent of natural crossing in rice. *J. Am. Soc. Agon.* 30: 743-753.
- Bin, W., W. Jingzhao, X. Wenwei, W. Wei, Z. Honggang, and N. Henry. 1995. Tagging and mapping of rice thermo-sensitive genic male sterile (TGMS) gene. Plant Genetic III Conference, Town & Country Conference Center, San Diego, California.
- Briggs, F.N., and P.F. Knowles. 1967. Introduction to plant breeding. *In: Reinhold publishing company.* Inc. U.S.A. 426 pp.

- Borkakati, R.P., and S.S. Virmani. 1996. Genetic of thermosensitive genic male sterility in rice. *Euphytica*. 88: 1-7.
- Caceres, M.E., F. Pupilli, E. Piano, and S. Arcioni. 2000. RFLP markers are an effective tool for the identification of creeping bentgrass (*Agrostis stolonifera* L.) cultivars. *Genet. Res. Crop Evol.* 47: 455– 459.
- Carnahan, H.L., J.R. Erickson, S.T. Tseng, and J.N. Rutger. 1972. Outlook for hybrid rice in the U.S.A. pp. 603-607. *In: Rice breeding*. International Rice Research Institute, Los Banos, Philippines.
- Causse M.A., T.M. Fulton, Y.G. Cho, S.N. Ahn, J. Chunwongse, K. Wu, J. Xiao, Z. Yu, P.C. Ronald, G. Second, S.R. McCouch, S.D. Tanksley, and S.E. Harrington. 1994. Saturated molecular map of the rice genome based on an interspecific backcross population. *Genet.* 138: 1251–1274.
- Chandraratna, M.F. 1964. Genetics and breeding of rice. Longman, Green and Go. Ltd., London.
- Chen, X., S. Temnykh, Y. Xu, Y.G. Cho, and S.R. McCouch. 1997. Development of a microsatellite framework map providing genome wide coverage in rice (*Oryza sativa* L.). *Theor. Appl. Genet.* 95: 553–567.
- Cheng, S., C. Fockler, W.M. Barnes, and R. Higuchi. 1994. Effective amplification of long targets from cloned inserts and human genomic DNA. *Proc. Natl. Acad. Sci.* 91: 5695-5699.
- Chien, A., D.B. Edgar, and J.M. Trela. 1976. Deoxyribonucleic acid polymerase from the extreme thermophile *Thermus aquaticus*. *J. Bacteriol.* 174: 1550-1557.
- Cho, J. 1995. Cytological study of double fertilization in *Oryza sativa* L. *Jpn. J. Breed.* 5: 131-148.

- Choomsai, M.L.A, W. Siripoonwiwat, S. Julsrigival, and K. Suriyawan. 2006. The development of TGMS lines in Thai rice by using molecular markers. Project report BT-B-06-RG-23-4601, National Center for Genetic Engineering and Biotechnology (BIOTEC), National Science and Technology development Agency (NSTDA).
- Dat, T. 2004. International year of rice 2004; rice is life. (Online). Available: <http://www.Rice2004.org> (January 15, 2005).
- Dianxing, W., S. Shengquan, C. Hairui, X. Yingwu, and S. Qingyao. 2003. A novel thermo/photoperiod-sensitive genic male-sterile (T/PGMS) rice mutant with green-revertible albino leaf color marker induced by gamma irradiation. *Field Crop Res.* 81(2-3): 141-147.
- Dilworth, E., and J.E. Frey. 2000. A rapid method for high throughput DNA extraction from plant material for PCR amplification. *Plant Mol Biol Rep.* 18: 61-64.
- Dong, N.V., P.K. Subudhi, P.N. Luong, V.D. Quang, T.D. Quy, H.G. Zheng, B. Wang, and H.T. Nguyen. 2000. Molecular mapping of rice gene conditioning thermosensitive genic male sterility using AFLP, RFLP and SSR techniques. *Theor. Appl. Genet.* 100: 727-734.
- Doyle, J.J., and J.L. Doyle. 1987. A rapid DNA isolation procedure for small quantities of fresh leaf tissue. *Phytochem Bull.* 19: 11-15.
- Erickson, J.R. 1969. Cytoplasmic male sterility in rice (*Oryza sativa* L.). *Am. Soc. Agon. Abstr.* 69: 6.

- Golembiewski, R.C., T.K. Danneberger, and P.M. Sweeney. 1997. Potential of RAPD markers for use in the identification of creeping bentgrass cultivars. *Crop Sci.* 37: 212–214.
- Gupta, P.K., R.K. Varshney, P.C. Sharma, and B. Ramesh. 1999. Molecular Markers and their applications in wheat breeding. *Plant Breed.* 118: 369-390.
- Hanada, H., and M. Hirai. 2003. Development of a genetic marker linked to the tendrill trait of sweat pea (*Lathyrus odoratus* L.). *Breed Sci.* 53: 7–13.
- Haohua, H., P. Xiaoshong, G. Huiming, Z. Changlan, and Y. Guoyou. 2006. Fertility behaviour of rice (*Oryza sativa*) lines with dominant male sterile gene and inheritance of sterility and fertility restoration. *Field Crop Res.* 98(1): 30-38.
- Harushima, Y., M. Yano, A. Shomura, M. Sato, T. Shimano, Y. Kuboki, T. Yamamoto, S.Y. Lin, B.A. Antonio, and A. Parco. 1998. A high-density rice genetic linkage map with 2275 markers using a single F₂ population. *Genet.* 148: 479–494.
- Hernandez, P., A. Martin, and G. Dorado. 1999. Development of SCARs by direct sequencing of RAPD products: a practical tool for the introgression and marker-assisted selection of wheat. *Mol Breed.* 5: 245–253.
- Hoan, N.T. 2005. Success on development hybrid rice in Veitnam. pp. 39–54. Hybrid rice and WORLD food security. China science and technology press, China.
- Huff, D.R., R. Peakall, and P.E. Smouse. 1993. RAPD variation within and among natural populations of outcrossing buffalograss. *Theor. Appl. Gen.* 86: 927–934.
- Huff, D.R. 2001. Characterization of Kentucky Bluegrass cultivars using RAPD markers. *Int. Turfgrass Soc. Res. J.* 9: 169–175.

- Jia, J.H., C.Y. Li, X.P. Qu, Q. Wang, Q.Y. Deng, M.L. Weng, and B. Wang. 2003. Fine mapping of the rice thermo-sensitive genic male-sterile gene *tms5*. *Theor. Appl. Genet.* 107: 917 – 921.
- Jia, J.H., D.S. Zhang, C.Y. Li, X.P. Qu, S.W. Wang, V. Chamarek, H.T. Nguyen, and B. Wang. 2001. Molecular mapping of the reverse thermo-sensitive genic male sterile gene (*rtms1*) in rice. Plant Genetic IX Conference, Town & Country Conference Center, San Diego, California.
- Jindasingh, M. 2006. Identification of markers linked to thermosensitive genic male sterility by bulked segregant analysis. M.S. Thesis. Graduate School, Maejo University. Chiang Mai.
- Jodan, N.E. 1938. Artificial hybridization of rice. *J. Am. Soc. Agron.* 30: 295-305.
- Johns, M.A., P.W. Skroch, J. Nienhuis, P. Hinrichsen, G. Bascur, and C. Munoz-Schick. 1997. Gene pool classification of common bean landraces from Chile based on RAPD and morphological data. *Crop Sci.* 37: 605–613.
- Jones, T.W.A. 1983. Instability during storage of phosphogluco-isomerase isoenzymes from ryegrasses (*Lolium spp.*). *Physiology Plant.* 58: 136–140.
- Joshi, S.P., S.G. Bhave, K.V. Chowdari, G.S. Apte, B.L. Dhonukshe, K. Lalitha, P.K. Ranjekar, and V.S. Gupta. 2001. Use of DNA markers in prediction of hybrid performance and heterosis for a three-line hybrid system in rice. *Biochem Genet.* 39: 179–200.
- Jung, G., P.W. Skroch, J. Nienhuis, D.P. Coyne, E. Arnaud-Santana, H.M. Ariyaratne, and J.M. Marita. 1999. Confirmation of QTL associated with common bacterial blight resistance in four different genetic backgrounds in common bean. *Crop Sci.* 39: 1448–1455.

- Krishnaiah, K., B.C. Viraktamath, M. Ilyas Ahmed, C.H.M. Vijayakumar, and M.S. Ramesha. 2001. Recent developments in hybrid rice research in India. *Proc. Int. Rice Res. Conf.* 20: 179 - 191.
- Kukita, Y., T. Tahira, S.S. Sommer, and K. Hayashi. 1997. SSCP analysis of long DNA fragments in low pH gel. *Human Mutation.* (10): 400-7.
- Kurata N., Y. Nagamura, K. Yamamoto, Y. Harushima, N. Sue, J. Wu, B.A. Antonio, A. Shomura, T. Shimizu, and S.Y. Lin. 1994. A 300 kilobase interval genetic map of rice including 883 expressed sequences. *Nat Genet.* 8: 365–372.
- Lang, N.T., P.K. Subudhi, S.S. Virmani, N. Huang, and D.S. Brar. 1997. Development of PCR-based marker for thermosensitive genetic male sterile gene, tms3(t) in rice. *RGN.* 14: 102-103.
- Lang, N.T., P.K. Subudhi, S.S. Virmani, D.S. Brar, G.S. Khush, Z. Li, and N. Huang. 1999. Development of PCR-based markers for thermosensitive genetic male sterility gene tms3(t) in rice (*Oryza Sativa* L.). *Hereditas.* 131(2): 121-127.
- Latha, R., K. Thiyagarajan, and S. Senthilvel. 2004. Genetics, fertility behaviour and molecular marker analysis of a new TGMS line, TS6, in rice. *Plant Breeding.* 123 (3): 235-238.
- Lawyer FC, S. Stoffel, R.K. Saiki, S.Y. Chang, P.A. Landre, R.D. Abramson, and D.H. Gelfand. 1993. High-level expression, purification and enzymatic characterization of full-length *Thermus aquaticus* DNA polymerase and a truncated form deficient in 5' to 3' exonuclease activity. *PCR Methods Appl.* 2: 275-287.
- Li, P. 1977. How we studied hybrid rice. [In Chinese, English summary]. *Acta Bot. sin.* 19: 7-10.

- Lin, S.C., and L.P. Yuan. 1980. Hybrid rice breeding in China. pp. 35-51. *In*: Innovative Approaches to Rice Breeding. International Rice Research Institute, Manila, Philippines.
- Lin, J.Y., and P.L. Pingali. 1994. Economic assessment of the potential for hybrid rice in tropical Asia. pp. 131-142. lessons from the Chinese experience. *In*: S.S. Virmani, ed. *Hybrid rice technology: new developments and future prospects*, International Rice Research Institute, Los Banos, Philippines.
- Lin, S.C. 1997. Rice breeding in China. (Notes from a seminar given by Mr. Lin Shih-cheng, Plant Breeder and member of the Rice Improvement Team of the Agriculture Association of the Peoples Republic of China, visiting IRRI, 17 Oct. 1997). *Int. Rice Res. Newsl.* 2(5):27-28.
- Lopez, M.T., T. Yoojinda, A. Vanavichit, and S. Tragoonrung. 2003. Microsatellite marker flanking the tms2 gene facilitated tropical TGMS rice line development. *Crop Sci.* 43(6): 2267.
- Lu, J.J., and T.T. Chang. 1978. Rice in its temporal and spatial perspectives. *In* B.S. Luh (ed.) *Rice: production and utilization*. AVI, Westport, Conn.
- Mace, E.S., H.K. Buhariwalla, and J.H. Crouch. 2003. A high-throughput DNA extraction protocol for tropical molecular breeding programs. *Plant Mol Biol Rep.* 21: 459a-h.
- Maclean, J.L., D.C. Dawe, B. Hardy, and G.P. Hettel. 2002. Rice almanac. pp. 35. Los Banos (Philippines): International Rice Research Institute, Bouake (cote d'Ivoire): West Africa Rice Development Association, Cali (Colombia): International Center for Tropical Agriculture, Rome (Italy): Food Agriculture Organization.

- Maruyama, K., H. Araki, and H. Kato. 1991. Thermosensitive genetic male sterility induced by irradiation. pp. 227–232. *In: Rice Genetics II*. International Rice Research Institute, Manila, Philippines.
- McCouch, S.R., G. Kochert, Z.H. Yu, Z.Y. Wang, G.S. Khush, W.R. Coffman, and S.D. Tanksley. 1988: Molecular mapping of rice chromosomes. *Theor. Appl. Genet.* 76: 815-829.
- McCouch S.R., X. Chen, O. Panaud, S. Temnykh, Y. Xu, Y.G. Cho, N. Huang, T. Ishii, and M. Blair. 1997. Microsatellite marker development mapping and applications in rice genetics and breeding. *Plant Mol Bio.* 35: 89–99.
- McCouch S.R., L.Teytelman, Y. Xu, K.B. Lobos, K. Clare, M. Walton, B. Fu, R. Maghirang, Z. Li, and Y. Xing. 2002. Development and mapping of 2240 new SSR markers for rice (*Oryza sativa* L.). *DNA Res.* 9: 199–207.
- Melcher, K. 2000. A modular set of prokaryotic and eukaryotic expression vectors. *Anal. Biochem.* 277: 109–120.
- Michelmore, R.W., I. Paaran, and K.V. Kesseli. 1991. Identification of markers linked to disease resistance genes by bulked segregant analysis: A rapid method to detect markers in specific genomic regions by using segregating populations. *Proc Natl Acad Sci USA.* 88: 9828–9832.
- Nagaraju, J, M. Kathirvel, R.R. Kumar, E.A. Siddiq, and S.E..asnain. 2002. Genetic analysis of traditional and evolved Basmati and non-Basmati rice varieties by using fluorescence-based ISSR-PCR and SSR markers. *Proc Natl Acad Sci USA.* 99: 5836–5841.
- Nagato, Y., and A. Yoshimura, Conveners. 1998. *Rice genome newsletter.* 15: 13 – 74.

- Ni, J.J., M.P Colowit, and D.J. Mackill. 2002. Evaluation of genetic diversity in rice subspecies using microsatellite markers. *Crop Sci.* 42: 601–607.
- Noguchi, Y. 1931. Environmental influences on flowering in rice with special reference to germination of pollen grains and development of pollen tube. (In Japanese). *Proc. Crop Sci. Soc. Jpn.* 3: 22-23.
- Noguti, Y., and N. Hamada. 1927. Uber die befruchtungsfahigkeit der narbe und pollen bei wasserreisplfängen. *J. Sci. Agric. Soc.* 300: 515-524.
- Office of Agriculture Economy. 2008. Thailand agriculture statistic. (Online). Available <http://www.oae.go.th/statistic/yearbook49/>. (July 12, 2008).
- Orita, M., H. Iwahana, H. Kanazawa, K. Hayashi, and T. Sekiya. 1989. Detection of polymorphisms of human DNA by gel electrophoresis as single-strand conformation polymorphisms. *Proc. Natl. Acad. Sci.* 86: 2766-2770.
- Orita, M., Y. Suzuki, T. Sekiya, and K. Hayashi. 1989. Rapid and sensitive detection of point mutations and DNA polymorphisms using the polymerase chain. *Genom.* 5: 874-879.
- Paran, I., and R.W. Michelmore. 1993. Development of reliable PCR based markers linked to downy mildew resistance genes in lettuce. *Theor. Appl. Gen.* 85: 985–993.
- Paris, M., and M. Carter. 2000. Cereal DNA: a rapid high-throughput extraction method for marker-assisted selection. *Plant Mol. Biol. Rep.* 18: 357-360.
- Rychlik, W., W.J. Spencer, and R.E. Rhoads. 1990. Optimization of the annealing temperature for DNA amplification in vitro. *Nucl. Acids. Res.* 18: 6409-6412.

- Saito A, M. Yano, N. Kishimoto, M. Nakagahra, A. Yoshimura, K. Saito, S. Kuhara, Y. Ukai, M. Kawase, and T. Nagamine. 1991. Linkage map of restriction fragment length polymorphism loci in rice. *Jpn. J. Breed.* 41: 665–670.
- Sharkey, D.J., E.R. Scalice, K.G. Christy Jr., S.M. Atwood, and J.L. Daiss. 1994. Antibodies as Thermolabile Switches: High Temperature Triggering for the Polymerase Chain Reaction. *Bio/Technology.* 12: 506-509.
- Shinjo, C., and T. Omura. 1966. Cytoplasmic-genetic male sterility in cultivated rice, *Oryza sativa* L. I. Fertilities of F1, F2 and off-spring obtained from their mutual reciprocal backcrosses and segregation of completely male sterile plant. *Jpn. J. Breed.* 16: 179-180.
- Singh, R., and Vermani, S. S. 1990. Recent progress in technology and development of hybrid rice in Asia. *IRRI Newslett.* 39: 133.
- Skroch, P., and J. Nienhuis. 1995. Impact of scoring error and reproducibility of RAPD data on RAPD based estimates of genetic distance. *Theor. Appl. Gen.* 91: 1086–1091.
- Stansel, J. W., and J.P. Craigmiles. 1966. Hybrid rice-Problems and potentials. *Rice J.* 69: 14-15.
- Steenkamp, J., I. Wild, A. Lourens, and P. Helden. 1994. Improved method for DNA extraction from *Vitis vinifera*. *Am J Enol Vit.* 45: 102-106.
- Stuber, C.W., M. Polacco, and M.L. Senior. 1999. Synergy of Empirical Breeding, Marker Assisted selection and Genomics to Increase Crop Yield Potential. *Crop Sci.* 39: 1571-1583.

- Subudhi, P.K., R.P. Borkakati, S.S. Virmani, and N. Huang, 1997. Molecular mapping of thermo sensitive genic male sterility gene in rice using bulked segregant analysis. *Genome*. 40, 188 - 194.
- Suh, H.S., L.J. Chen, S.G. Kang, and D.S. Lee. 2004. Molecular approach of new type thermo-sensitive genic male-sterile gene in rice (*Oryza sativa L.*). American Society of Plant Biology. (Online). Available: <http://abstracts.aspb.org/pb2004/public/p34/7935.html> (July 24, 2004).
- Sunnucks, P., A.C.C. Wilson, L.B. Beheregaray, K. Zenger, J. French, and A.C. Taylor. 2000. SSCP is not so difficult: the application and utility of single-stranded conformation polymorphism in evolutionary biology and molecular ecology. *Mol Ecol*. (9): 1699-710.
- Tan, Z.C., Y.Y. Li, L.B. Chen, and G.Q. Zhou. 1990. Studies on ecological adaptability of dual purpose line Annong S-1. *Hybrid Rice*. 3: 35-38.
- Temnykh S., G. DeClerck, A. Lukashova, L. Lipovich, S. Cartinhour, and S. McCouch. 2001. Computational and experimental analysis of microsatellites in rice (*Oryza sativa L.*): frequency, length variation, transposon associations, and genetic marker potential. *Genome Res*. 11: 1441-1452.
- Temnykh S., W.D. Park, N. Ayres, S. Cartinhour, N. Hauck, L. Lipovich, Y.G. Cho, T. Ishii, and S.R. McCouch. 2000. Mapping and genome organization of microsatellite sequences in rice (*Oryza sativa L.*). *Theor. Appl. Gen.* 100: 697-712.
- Terada, S. 1928. Embryological studies in *Oryza sativa L.* *Japan J. Botany*. 4.

- Tran, D.V. 1997. FAO global hybrid rice development programme. Paper presented at the International Workshop on Progress in the Development and Use of Hybrid Rice Outside China, 28-30 May 1997, Hanoi, Viet Nam.
- Tran, D.V., and V.N. Nguyen. 1998. Global hybrid rice: progress, issues and challenges Crop and Grassland Service, Plant Production and Protection Division, FAO.
- Ukhoskit, K. 2006. *Genetic*. Thumasat University Press, Bangkok, Thailand. 474 pp.
- Vidal, J.R., P. Delavault, M. Coarer, and A. Defontaine. 2000. Design of grapevine (*Vitis vinifera* L.) cultivar-specific SCAR primers for PCR fingerprinting. *Theor. Appl. Gen.* 101: 1194–1201.
- Vergara, B.S., and T.T. Chang. 1976. The flowering response of the rice plant to photoperiod, 3rd ed. International Rice Research Institute, Los Banos, Philippines.
- Vermani, S.S., and D.S. Athwal. 1973. Genetic variability in floral characteristics influencing outcrossing in *Oryza sativa* L. *Crop Sci.* 13: 66-67.
- Virmani, S.S. 1994. Prospects of hybrid rice in the tropics and subtropics. pp. 7-19. Hybrid rice technology: new developments and future prospects. International Rice Research Institute, Manila. Philippines.
- Virmani, SS . 1996. Hybrid rice. *Adv. Agron.* 57: 378–462.
- Wagener, C., and P. Nollau. 1997. Screening methods for detection of unknown point mutations. *Clinical Chem.* 4: 1114-1128.
- Wang, B., W.W. Xu, J.Z. Wang, W. Wu, H.G. Zheng, Z.Y. Yang, J.D. Ray, and H.T. Nguyen. 1995. Tagging and mapping the thermo sensitive genic male-sterile

- gene in rice (*Oryza sativa* L.) with molecular markers *Theor. Appl. Gen.* 91: 1111 - 1114.
- Wang, Y.G., Q.H. Xing, Q.Y. Deng, F.S. Liang, L.P. Yuan, M.L. Weng, and B. Wang, 2003. Fine mapping of the rice thermo-sensitive genic male-sterile gene *tms5*. *Theor. Appl. Gen.* 107: 917-921.
- Warnke, S.E., D.S. Douches, and B.E. Branham. 1997. Relationships among creeping bentgrass cultivars based on isozyme polymorphisms. *Crop Sci.* 37: 203–207.
- Wu, X.J. 1997. Genetic strategies to minimize the risk in exploiting heterosis in rice by means of thermosensitive genic male sterility system. pp. 121-131. *In: Proc. Int. Symp. on Two-Line System of Heterosis Breeding in Crops*, 6-8 September. China National Hybrid Rice Research and Development Center, Changsha, China.
- Wu, J., T. Maehara, T. Shimokawa, S. Yamamoto, C. Harada, Y. Takazaki, N. Ono, Y. Mukai, K. Koike, and J. Yazaki. 2002. A comprehensive rice transcript map containing 6591 expressed sequence tag sites. *Plant Cell.* 14: 525–535.
- Xuan, V.T., and V.E. Ross. 1976. Training manual for rice production. *In: International Rice Research Institute*, Los Banos, Philippines.
- Yuan, L.P., and S.S. Virmani. 1988. Status of hybrid rice research and development. pp. 7-24. *In: Proceedings of the International Symposium on Hybrid Rice*, 6-10 October 1986. Changsha, China.
- Yuan, L.P. 1966. A preliminary report on male sterility in rice. *Sci. Bull.* (4): 32-34.
- Yuan, L.P. 1994. Purification and production of foundation seed of rice PGMS and TGMS lines. *Hybrid Rice.* 6: 1–2.
- Yuan, L.P. 1996. Hybrid rice 1996. (6): 1-3.

- Yuan, L.P. 1997. Exploiting crop heterosis by two-line system hybrids: current status and future prospects. pp. 215 – 220. *In: Proc. Int. Symp. on Two-Line System of Heterosis Breeding in Crops*, 6-8 September. China National Hybrid Rice Research and Development Center, Changsha, China.
- Yuan, L. P. 1998. Hybrid rice breeding in China. pp. 27 - 33. *In: S. S. Virmani, E. A. Siddiq, and K. Muralidharan (eds), Advances in Hybrid Rice Technology*, International Rice Research Institute, Manila, Philippines.
- Yuan, L.P. 1998. Hybrid rice development and use. *In: innovative approach and challenges*. China National Hybrid Rice Research and Development Centre. Changsha, China.
- Yuan, L.P. 2004. Progress in breeding of Super Hybrid Rice. pp. 9 – 11. *In: Proceeding of the 1st International conference on rice for the future*. Kasetsart University. Bangkok, Thailand