



DAFTAR PUSTAKA

- Ascer, J.S.; Graham, R.D.; Elliot, D.E.; Scot, J.M. 1994. Agronomic value of seed with high nutrient content. CIMMYT, Mexico. Pp. 297 – 308.
- Azzalini, A. and D.R. Cox. 1984. Two test associated with analysis of variance. J.R. Statistic. Soc. 2 : 335 – 343.
- Abou-El-Fittouh, H. A., Rawlings, J. O., and Miller, P. A. 1969. Classification of environments to control genotype by environment interactions with an application to cotton. Crop Sci. 9:135-140.
- Basford, K. E. 1982. The use of multidimensional scaling in analysing multi-attribute genotype response across environments. Aust.J.Agric.Res. 33:473-480.
- Becker, H. B. and Leon, J. 1988. Stability analysis in plant breeding. Plant Breed. 101:1-23.
- Bilbro, J.D. and L.L. Ray. 1976. Environmental stability and adaptation of several cotton cultivars. Crop Sci. 16 : 821 - 824
- Bouis, H.E. 2000. Enrichment of food staples through plant breeding: a new strategy for fighting micronutrient malnutrition. J. Nutrition 16:701-704.
- Bouis, H.E. 2002. Plant Breeding : A New Tool for Fighting Micronutrient Malnutrition. J. Nutr. 132 : 491S – 494S
- Bouis, H.E. 2003. Micronutrient Fortification of Plant Through Plant Breeding : Can It Improve Nutrition in Man et Low Cost. Proceeding of Nutrition Society. Vol 062 (002).
- Bridge, W.C., Jr. 1989. Analysis of plant breeding experiment with heterogeneous variance using mixed model equation. P. 145-151. In *Applications of mixed models in agriculture and related discipline*. So. Coop. Ser. Bull. No. 343. Louisiana Agricultural Experiment Station, Baton Rouge, LA.
- Bucio Alanis, L. 1966. Environmental and genotype-environmental components of variability I. Inbred lines. Heredity 21:387-397.
- Burgueno, J., J. Crossa, and M. Vargas. 2001. SAS program for graphing GE and GGE biplot. Biometrics and Statistics Unit. CIMMYT. INT. Mexico.



- Busey, P. 1983. Management of crop breeding, p. 31 – 54. In. D.R. Wood, K.M. Rawal, and M.N. Wood (Eds.). Crop Breeding. American Society of Agronomy, Crop Science Society of America, Madison.
- Caballero B. 2002. Global patterns of child health: the role of nutrition. *Annals of Nutrition and Metabolism* 46, 3–7.
- Chapman, S. C., Crossa, J., Basford, K. E., and Kroonenberg, P. M. 1997. Genotype by environment effects and selection for drought tolerance in tropical maize. II . Three-mode pattern analysis. *Euphytica* 95:11-20.
- Chaudhary, R.C. 1995. Genotype x environment interaction in plant breeding. Introduction to new developments in G x E analysis and interpretation of results. Training Centre, IRRI.
- Crossa, J. 1990. Statistical analyses of multilocation trials. *Adv.Agron.* 44:55-85.
- Crossa, J., Cornelius, P.L., and Yan, W. 2002. Biplot of linier-bilinear models for stability crossover genotype x environment interaction. *Crop Sci.* 42 : 619-633.
- Cooper , M., DeLacy, I. H., and Basford, K. E. 1996. Relationships among analytical methods used to analyse genotypic adaptation in multi-environment trials. *In* Cooper, M. and Hammer, G. L. (ed.). Plant adaptation and crop improvement. 193-225.
- DeLacy, I. H., Basford, K. E., Cooper, M., Bull, J. K., and McLaren, C. G. 1996. Analysis of multi-environment trials - An historical perspective. *In* Cooper, M. and Hammer, G. L. (ed.). Plant adaptation and crop improvement. 39-124.
- Departemen Kesehatan RI. 2004. Pedoman penanggulangan gizi untuk remaja putri dan wanita usia subur. Dirjen Pembinaan Kesehatan Masyarakat. Jakarta. 23 hal.
- Dyke, G.V., Lane, P.W. and J.F. Jenkyn. 1995. Sensitivity (stability) analysis of multiple variety trials, with special reference to data expressed as proportions or percentages. *Expl. Agric.*, 31: 75-87.
- Ebdon, J.S., and H.G Gauch. 2002. Additive main effect and multiplicative interaction analysis of national turfgrass performance trials : Interpretation of genotype x environment interaction. *Crop. Sci.* 42 : 489 – 496.
- Eberhart, S. A. and W.A. Russel. 1966. Stability parameters for comparing varieties. *Crop Sci.* 6:36-40.



- Eberhart, S.A. and W.A. Russell. 1969. Yield stability for 10 – line diallel of single-cross and double-cross maize hybrid, *Crop Sci.* 9 : 357 – 361.
- Evans, L.T. 1993. *Crop evolution, adaptation, and yield.* New York, Cambridge Univ. Press.
- Falconer, D.S. 1990. Selection in different environments: effects on environmental sensitivity (reaction norm) and on mean performance. *Genet. Res. Camb.*, 56: 57-70.
- Finley, K.W. and G.N. Wilkinson. 1963. The Analysis of adaptation in a plant breeding programme. *Aust. J. Ar. Res.* 14 : 742 – 754.
- Fox, P. N. and Rosielle, A. A. 1982. Reference sets of genotypes and selection for yield in unpredictable environments. *Crop Sci.* 22:1171-1175.
- Fox, P.N., B. Skovmand, B.K. Thompson, H.J. Braun, and R. Cormier. 1990. Yield and adaptation of hexaploid spring triticale. *Euphytica* 47:57–64.
- Francis, T. R. and Kannenberg, L. W. 1978. Yield stability studies in short-season maize I . A descriptive method for grouping genotypes. *Can.J.Plant Sci.* 58:1029-1034.
- Freeman, G. H. and Perkins, J. M. 1971. Environmental and genotype-environmental components of variability VIII. Relations between genotypes grown in different environments and measures of these environments. *Heredity* 27:15-23.
- Gail., M. and R. Simon. 1985. Testing for qualitative interaction between treatment effects and patient subsets. *Biometric* 41 : 361 - 372
- Gauch, H. G. Jr. 1992. *Statistical analysis of regional yield trials : AMMI analysis of factorial designs.* ELSEVIER.
- Gauch, H.G., Jr., and R.W. Zobel. 1997. Identifying mega-environments and targeting genotypes. *Crop. Sci.* 37 : 311 – 326.
- Graham, R.D., D. Senandhira, S. Beebe, C. Iglesias and I. Monasterio. 1999. Breeding for micronutrient density in edible portion of staple food crops : conventional approaches. Elsevier. *Field Crops Research* 60 : 57 - 80
- Graham, R.D., Welch, R.M. and Bouis, H.E. 2001. Addressing micronutrient malnutrition through enhancing the nutritional quality of staple foods : principle, perspectives and knowledge gaps. *Adv. Agron.* 70 : 77-142.



- Graham R.D., and Welch R.M. 2004. Breeding for staple-food crops with high micronutrient density. *Agricultural Strategies for Micronutrients Working Paper No. 3*. Washington, DC: International Food Policy Research Institute, 1–72.
- Gregorio G.B. 2005. Breeding for trace mineral density in rice. *Food and Nutrition Bulletin* 21, 382–386.
- Gregorio G.B., J.D. Hass, J.L. Beard, L.E. Murray, A.M. del Mundo dan A. Felix. 2005. Iron-Biofortified Rice Improves the Iron Store of Nonanemic Filipino Women. *J. Nutr.* 135 : 2823 – 2830.
- Gregorio G.B. 2002. Progress in Breeding for Trace Element in Staple Crops. *J. Nutr.* 132 : 500S – 502S.
- Grusak, M.A., Pearson, J.N., and Marentes, E. 1999. The physiology of micronutrient homeostasis in field crops. *Field Crops Research*. 60 : 41 – 56.
- Hanson, W. D. 1970. Genotypic stability. *Theor. Appl. Genet.* 40:226-231.
- Hernandez, C. M., Crossa, J., and Castillo, A. 1993. The area under the curve: an index for selecting desirable genotypes. *Theor. Appl. Genet.* 87:409-415.
- Hernandez, M.V., and J. Crossa. 2000. The AMMI analysis and graphing the biplot. *CIMMYT. INT. Mexico*.
- Huhn, M., and R. Nassar. 1989. On tests of significance for non-parametric measures of phenotypic stability. *Biometrics* 45:997–1000
- Huhn, M., and J. Leon. 1995. Non-parametric analysis of cultivar performance trials: Experimental results and comparison of different procedures based on ranks. *Agron. J.* 87:627–632.
- Huhn, M. 1990. Nonparametric measures of phenotypic stability. Part 1: theory. *Euphytica*, 47: 189-194.
- Joshi, A.K., Crossa, J., Arun, B., Chad, R., Trethowan, R., Vargas, M., and Ortiz-Monasterio, I. 2010. Genotype x environment interaction for Zinc and Iron concentration of wheat grain in eastern Gangetic plains of India. *Field Crops Research*. 116 : 268 – 277.
- Kang, M.S. 1988. A rank-sum method for selecting high-yielding, stable corn genotypes. *Cereal Res. Comm.* 16:113–115



- King, J.C. 2002. Evaluating the Impact of Plant Biofortification on Human Nutrition. Simposium Plant Breeding, A New Tool for Fighting Micronutrient Malnutrition. *J. Nutr.* 132 : 511S – 513S.
- Latief, D. 2000. Sambutan Kepala Direktorat Bina Gizi Masyarakat *dalam* Pedoman penanggulangan gizi untuk remaja putri dan wanita usia subur. Dirjen Pembinaan Kesehatan Masyarakat. Jakarta. 23 hal.
- Lin, C. S. and Binns, M. R. 1985. Procedural approach for assessing cultivar-location data: Pairwise genotype-environment interactions of test cultivars with checks. *Can.J.Plant Sci.* 65:1065-1071.
- Lin, C. S., Binns, M. R., and Lefkovitch, L. P. 1986. Stability analysis : Where do we stand ? *Crop Sci.* 26:894-900.
- Lin, C. S. and Binns, M. R. 1988a. A method of analysing cultivar x location x year experiments: a new stability parameter. *Theor.Appl.Genet.* 76:425-430.
- Lin, C. S. and Binns, M. R. 1988b. A superiority measure of cultivar performance for cultivar x location data. *Can.J.Plant Sci.* 68:193-198.
- Lin, C.S. and Binns, M.R. 1991. Genetic properties of four types of stability parameter. *Theor. Appl. Genet.*, 82: 505-509.
- Lin, C.S. & Butler, G. 1988. A data-based approach for selecting locations for regional trials. *Can. J. Plant Sci.*, 68: 651-659.
- Ma, B.L., W. Yan., L.M. Dwyer., J. Fregeau-Reid, H.D. Voldeng, Y. Dion, and H. Nass. 2004. Graphic Analysis of genotype, environment, nitrogen fertilizer, and their interactions on spring wheat yield. *Agron. J.* 96 : 169 – 180.
- Marschner, H. 1995. Mineral nutrition of higher plants. 2nd edn. Academic press. London.
- Matheson, A.C. and P.P. Cotterill. 1990. Utility of genotype x environment interactions. *For. Ecol. Manage.*, 30 : 159 – 174.
- McKeand, S.E. 1990. Stability parameter estimates for stem volume for loblolly pine families growing in different region in the southeastern US., *Forest Sci.* 36 : 10-17
- Mungomery, V. E., Shorter, R., and Byth, D. E. 1974. Genotype x Environment interactions and environmental adaptation. I Pattern analysis - Application to Soya bean populations. *Aust.J.Agric.Res.* 25:59-72.



- McKeand, S.E. 1990. Stability parameter estimates for stem volume fo loblolly pine families growing in different region in the southeastern US., *Forest Sci.* 36 : 10 – 17.
- Miller, R.O., Jacobsen, J.S, Skogley, E.O. 1993. Aerial accumulation and partitioning of nutrients by hard red spring wheat. *Common. Soil Sci. Plant Anal.* 24 : 2389 – 2407.
- Mungomery, V.E., Shorter, R., and Byth, D.E. 1974. Genotype x environment interaction and environmental adaptation. I. Pattern analysis- Aplication to soya bean populations. *Aust. J. Agric. Res.* 25 : 59 – 72.
- Nasrullah. 1981. A Modified procedure for indentifying varietal stability. *Agric. Sci.* 3 (4) : 153 – 159
- Nasrullah. 2009. Analisis data uji multilokasi – musim. I. Theory
- Nassar, R. and Huhn, M. 1987. Studies on estimation of phenotypic stability: Tests of significance for nonparametric measures of phenotypic stability. *Biometrics* 43:45-53.
- Nuquist, W.E. 1991. Estimates of heritability and orediction of selection respons in plant population. *Crit. Res. Plant Sci.* 10 : 235 – 322.
- Oikeh, S.O; A. Menkir; B Maziya-Dixon; R.M. Welch; R.P. Glahn dan G. Gauch Jr. 2004. Environmental stability of Iron and Zinc concentration in grain of elite early-maturing tropical maize genotypes grown under field condition. *Crop and Soils.*
- Oury, F.X., Leenhardt, F., Remesy, C., Chanliaud, E., Duperrier, B., Balfourier, F., and Charmet, G. 2006. Genetic variability and stability of grain magnesium, zinc and iron concentration in bread wheat. *European Journal of Agronomy.* 25 : 177 – 185.
- Pearson, J.N., Rengel, Z., Jenner, J.F., and Graham, R.D. 1998. Dynamics of zinc and manganese into developing wheat grains. *Aust. J. Plant Physiol.* 25, 139 – 144.
- Perkins, J. M. and Jinks, J. L. 1968. Environmental and genotype-environmental components of variability III. Multiple lines and crosses. *Heredity* 23:339-356.
- Perkins, J. M. and Jinks, J. L. 1971a. Specificity of the interaction of genotypes with contrasting environments. *Heredity* 26:463-474.



- Perkins, J. M. and Jinks, J. L. 1971b. Analysis of genotype x Environment interaction in triple test cross data. *Heredity* 26:203-209.
- Plaisted, R. I. and Peterson, L. C. 1959. A technique for evaluating the ability of selection to yield consistently in different locations or seasons. *Am.Potato J.* 36:381-385.
- Plaisted, R. L. 1960. A shorter method for evaluating the ability of selections to yield consistently over locations. *Am.Potato J.* 37:166-172.
- Ramos, R.G.A; R.V. Manaois; S.S.P. Escubio; G.D.G. Garcia; E.C.Arocena dan L.S. Sebastian. 2005. Grain quality and Iron density of Philippine rice cultivar. Philippine Rice Research Institute, Maligaya, Science City of Munoz, Nueva Ecija, 3119, Philippines. 6 p.
- Rengel, Z., G.D. Batten and D.E. Crowley. 1999. Agronomic approaches for improving the micronutrient density in edible portion of field crops. Elsevier. *Field Crops Research* 60 : 27 - 40
- Samonte, S.O.P.B., L.T. Wilson, A.M. McClung, and J.C. Medley. 2005. Targeting cultivar onto rice growing environment using AMMI and SREG GGE biplot analysis. *Crop Sci.* 45 : 2414 – 2424.
- Shafii, B. and W.J. Price. 1998. Analysis of genotype-by-environment interaction using Additive Main Effects and Multiplicative Interaction model and stability estimates. *J.Agric. Biol. Environ. Stat.*, 3 : 335 – 345.
- Shukla, G.K. 1972. Some statistical aspects of partitioning genotype-environmental components of variability. *Heredity* 29:237-245.
- Silvey, V. 1981. The contribution of new wheat, barley and oat varieties to increasing yield. *Expl. Agric.* 17 : 355 – 362.
- Simmonds, N.W. 1981. Genotype (G), environment (E), and GE component of crop yields. *Expl. Gric.* 17 : 355 – 362.
- Soemartono dan Nasrullah. 1988. *Genetika Kuantitatif*. PAU – Bioteknologi. UGM. 171 p.
- Toenniessen, G.H. 2002. Crop Genetic Improvement for Enhanced Human Nutrition. *J. Nutr.* 132 : 2943S – 2946S.
- Welch, R. M. 2000. Importance of seed mineral nutrient reserves in crop growth and development. Rengel, Z. eds. *Mineral Nutrition of Crops: Fundamental Mechanisms and Implications* 1999:205-226 Food Products Press New York, NY.



- Welch, R.M. 2002. Breeding Strategic for Biofortified Staple Olant Food to Reduce Micronutrient Malnutrition Globally. *J Nutr.* 132 : 495S – 499S.
- Welch R.M, House WA, Breebe S, Senadhira D, Gregorio GB, Cheng Z., 2002. Testing iron and zinc bioavailability in genetically enriched bean and rice using rat model. *Food Nutr. Bull.* 21 : 428 – 433.
- White, J. G. and Zasoski, R. J. 2000. Mapping soil micronutrients. *Field Crops Res* 60:11-26.
- Yan, W., L.A Hunt., Q. Sheng, and Z. Szlavnic. 2000. Cultivar evaluation and mega-environment investigation based on GGE biplot. *Crop. Sci.* 40 : 507-605.
- Yan, W., P.L. Cornelius, J. Crossa, and L.A. Hunt. 2001. Two types of GGE biplot for analyzing multi-environment trial data. *Crop. Sci.* 41 : 656 – 663.
- Yan., W. 2001. GGE biplot – a windows application for graphical analysis of multienvironment trial data and other types of two-way data. *Agron. J.* 93 : 1111-1118.
- Yan., W. 2002. Singular value partitioning in biplot analysis of multienvironment trial data. *Agron. J.* 94 : 990 – 996
- Yan, W. and L.A. Hunt. 2002. Biplot analysis of diallel data. *Crop Sci.* 42 : 21 – 30.
- Yan, W., and M.S. Kang. 2003. GGE biplot analysis : A graphical tool for breeders, geneticist, and agronomists. CRS PRESS. Boca Raton, FL.
- Yan, W., and Racjan, I. 2002. Biplot analysis of test sites and trait relations of soybean in Ontario. *Crop Sci.* 42 : 11-20
- Zobel, R.W., M.J. Wright, and H.G. Gauch, Jr. 1988. Statistical analysis of a yield trial. *Agron. J.* 80 : 388 – 393.