Major M. Goodman

William Neal Reynolds and Distinguished University Professor
of
Crop Science, Statistics, Genetics, and Botany

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EDUCATION:

1956-1960 - Iowa State University, Ames, Iowa

Degree: B.S. Date: 1960
Major: Mathematics
Minor: Chemistry

1960-1963 - North Carolina State University, Raleigh, North Carolina

Degree: M.S. Date: 1963
Major: Genetics
Minor: Statistics

M.S. Thesis: A study of the genetic variability in divergent and closely interbred populations of maize. (Under the direction of H. F. Robinson)

1963-1965 - North Carolina State University, Raleigh, North Carolina

Degree: Ph.D. Date: 1965
Major: Genetics
Minor: Statistics

Ph.D. Thesis: Classification, correlation, and the structure of populations. (Under the direction of S. G. Stephens.)

RESEARCH AND PROFESSIONAL EXPERIENCE:

1960-1961	Research Assistant	North Carolina State University
1961-1965	NSF Co-op Fellow	North Carolina State University
1965-1967	NSF Postdoctoral Fellow	Inst. de Genetica, Escola Superior de Agricultura,Piracicaba, Sao Paulo, Brazil
1967-1968	Visiting Assistant Professor	North Carolina State University
1968-1970	Assistant Professor	North Carolina State University
1970-1976	Associate Professor	North Carolina State University
1976-1988	Professor	North Carolina State University
1987-1988	Panel Director	Genetic Mechanisms and Molecular Biology, USDA Competitive Grants
1988-Present	William Neal Reynolds and Distinguished University Professor	North Carolina State University

PROFESSIONAL SOCIETY MEMBERSHIPS:

Crop Science Society of America
Society for Economic Botany
Society for Systemic Botany
American Society of Agronomy
National Academy of Sciences
Gamma Sigma Delta
Phi Kappa Phi
Sigma Xi

PROFESSIONAL SERVICE:

- Member, Rockefeller Maize Germplasm Committee, 1972-1975
- Chair, Maize Crop Advisory Committee, USDA, 1981-86; Member, 1986- 2001
- Chair, Advisory Panel for Maize Genetics Stock Center, 1985-1986
- Panel member, Genetic Mechanisms, USDA Competitive Grants, 1983-1985
- Member, Board of Governors, UNC Press, 1984-2001
- Panel member, OTA panel on Biological Diversity, 1985-1986
- Vice-chairman, NAS-NRC Panel on Global Genetic Resources,1986-1993
- Panel director, Plant Genetics and Molecular Biology, USDA Competitive Grants, 1987-1988

MAJOR RESEARCH INTERESTS:

Evolution of cultivated plants, especially maize
Plant breeding
Isozyme genetics
Numerical taxonomy

HONORS:

- National Merit Scholarship
- Phi Sigma Award for Outstanding Ph.D., NCSU, 1965
- Phi Kappa Phi Award for Outstanding Ph.D., NCSU, 1965
- NSF Postdoctoral Fellow 1965-67
- Sigma Xi Research Award, 1973
- NCSU Alumni Association Research Award, 1982
- Fellow, Crop Science Society, 1986
- Member, National Academy of Sciences, 1986
- Board of Trustees Citation, NCSU, 1987
- O. Max Gardner Award, University of North Carolina, 1987
- Fellow, Agronomy Society of America, 1988
- William Neal Reynolds and Distinguished University Professor, 1988
- USDA Superior Service Award (to Quantitative Genetics Group), 1990
- Certificate of Merit, NCSU Chapter Gamma Sigma Delta, 1994
- Meyer Medal, Crop Science Society of America, 1999

TEACHING:

Graduate programs directed:	M.S.	4
	Ph.D.	13
Post Docs directed:		8
Visiting scientists:		7

Many guest lectures in graduate and undergraduate agronomy and plant breeding courses.

RESEARCH RELEASES: (since 1995; 90 total):

NC290A, NC322, NC324, NC326, NC328, and NC330 (1996).

NC310, NC332, NC334, NC336, NC338, NC340, and NC342 (1997).

NC344, NC346, NC348, NC350, NC352, and NC354 (1998).

NC356, NC358, NC360, NC362, NC364, NC366, NC368, NC370, and NC372 (1999).

NC374, NC376, NC378, NC780, NC380, NC 382, NC384, NC386, NC388, NC390, NC392, NC394, and NC396 (2001).

NC432, NC434, NC436, NC438, NC440, NC442, NC444, NC446, NC448, NC450, NC452, NC454, NC456, and NC458 (2002).

NC460, NC462, NC464, NC466, NC468, NC470, NC472, NC474, NC476, NC478, NC480, NC482, NC484, NC486, NC488, NC490, NC492, NC494, NC496, NC498, NC500, NC502, NC504, NC506, NC508, NC510, NC512, NC514, NC516, NC518, NC520, NC522.

PUBLICATIONS:

Totals:

Journals, refereed:	102
Abstracts	48
Books	2
Book Chapters	39
Other	8
Professional presentations	40

Publications: (Peer reviewed, books/proceedings, technical bulletins, books)

Goodman, Major M. 1965. Estimates of genetic variance in adapted and exotic populations of maize. Crop Science 5:87-90.

Goodman, Major M. 1965. The History and Origin of Maize. Current Theories on the Relationships Between Maize and Some of Its Relatives. North Carolina Agricultural Experiment Station Technical Bulletin No. 170.

Goodman, Major M. 1966. Correlation and the structure of introgressive populations. Evolution 20:191-203.

Goodman, Major M. 1967. The races of maize: I. The Use of Mahalanobis' generalized distances to measure morphological similarity. Fitotecnia Latinoamericana 4:1-22.

Goodman, Major M. 1967. The identification of hybrid plants in segregating populations. Evolution 21:334-340.

Goodman, Major M. 1968. A measure of 'overall variability' in populations. Biometrics 24:189-192.

Goodman, Major M. 1968. The races of maize: II. Use of multivariate analysis of variance to measure morphological similarity. Crop Science 8:693-698.
[Reprinted in Multivariate Statistical Methods: Among-Groups Covariation. 1975. pp. 97-102. W. R. Atchley and E. H. Bryant (eds.). Dowden, Hutchinson, and Ross, Stroudsburg, Pennsylvania. Benchmark Papers in Systematic and Evolutionary Biology 1].

Goodman, Major M. 1969. Measuring evolutionary divergence. Japanese Journal of Genetics 44 (Suppl. 1):310-316.

Goodman, Major M. and E. Paterniani. 1969. The races of maize: III. Choices of appropriate characters for racial classification. Economic Botany 23:265-273.

Goodman, Major M. 1972. Distance analysis in biology. Systematic Zoology 21:174-186. [Reprinted in Multivariate Statistical Methods: Among-Groups Covariation. 1975. pp. 377-389. W. R. Atchley and E. H. Bryant (eds.). Dowden, Hutchinson, and Ross, Stroudsburg, Pennsylvania. Benchmark Papers in Systematic and Evolutionary Biology 1].

Stevenson, J. C. and M. M. Goodman. 1972. Ecology of exotic races of maize. I. Leaf number and tillering of 16 races under four temperatures and two photoperiods. Crop Science 12:864-868.

Goodman, M. M. 1973. Genetic distances: Measuring dissimilarity among populations. Yearbook of Physical Anthropology 17:1-38.

Goodman, M. M. 1974. Numerical aids in taxonomy, pp. 485-500. *In* Albert E. Radford, William C. Dickison, Jimmy R. Massey, and C. Ritchie Bell (eds.).Vascular Plant Systematics.

Goodman, M. M. 1976. Maize, pp. 128-136. *In* N. W. Simmonds (ed.). Evolution of Crop Plants. New York: Longman Inc.

Bird, Robert McK. and M. M. Goodman. 1977. The races of maize. V. Grouping maize races on the basis of ear morphology. Economic Botany 31:471-481.

Brown, William L. and Major M. Goodman. 1977. Races of corn. IN Corn and Corn Improvement. (Ed.) G. F. Sprague, pp. 49-88. Madison, Wisconsin. American Society of Agronomy, Inc.

Goodman, Major M. and Robert McK. Bird. 1977. The races of maize. IV. Tentative grouping of 219 Latin American races. Economic Botany 31:204-221.

Hussaini, S. H., M. M. Goodman, and D. H. Timothy. 1977. Multivariate analysis and the geographical distribution of the world collection of finger millet. Crop Science 17:257-263.

Paterniani, E. and M. M. Goodman. 1977. Races of Maize in Brazil and Adjacent Areas. CIMMYT, Mexico City. 95 p.

Stuber, C. W., M. M. Goodman, and F. M. Johnson. 1977. Genetic control and racial variation of β-glucosidase isozymes in maize (*Zea mays* L.). Biochemical Genetics 15:383-394.

Cervantes Santana, Tarcicio, Major M. Goodman and Eduardo Casas Diaz. 1978. Efectos geneticos y de interaccion genotipo-ambiente en la clasificacion de razas Mexicanas de maiz. Agrociencia 31:25-43.

Cervantes, S., T., M. M. Goodman, E. Casas D., and J. O. Rawlings. 1978. Use of genetic effects and genotype by environmental interactions for the classification of Mexican races of maize. Genetics 90:339-348.

Goodman, M. M. 1978. A brief survey of the races of maize and current attempts to infer racial relationships, pp. 143-158. *In* D. B. Walden (ed.).Maize Breeding and Genetics. New York: John Wiley and Sons.

Goodman, Major M. 1978. History and origin of corn, pp. 1-31. *In* E. Paterniani (ed.). Melhoramento e Producao do Milho no Brasil. Piracicaba, SP, Brasil: Fundacao Cargill.

Goodman, Major M. and J. Stephen C. Smith. 1978. Botany, pp. 32-70. *In* E. Paterniani. (ed.). Melhoramento e Producao do Milho no Brasil. Piracicaba, SP, Brasil: Fundacao Cargill.

Castillo-Morales, Alberto and Major M. Goodman. 1979. The least squares tree for a four points distance matrix. The Classification Society Bulletin 4:5-13.

Timothy, D. H. and M. M. Goodman. 1979. Germplasm preservation: The basis of future feast or famine. Genetic resources of maize -- An example. pp. 171-200. *In* I. Rubenstein, R. L. Phillips, C. E. Green and B. G. Gengenbach (eds.). The Plant Seed: Development, Preservation, and Germination. Academic Press, Inc.

Cardy, B. J., C. W. Stuber and M. M. Goodman. 1980. Techniques for starch gel electrophoresis of enzymes from maize (*Zea mays* L.). Institute of Statistics Mimeograph Series No. 1317, North Carolina State University. 31 p.

Goodman, M. M. and C. W. Stuber. 1980. Genetic identification of lines and crosses using isoenzyme electrophoresis. Corn and Sorghum Industry Research Conference Proc. 35:10-31.

Goodman, M. M., C. W. Stuber, C.--N. Lee and F. M. Johnson. 1980. Genetic control of malate dehydrogenase isozymes in maize. Genetics 94:153-168.

Goodman, M. M., C. W. Stuber, K. Newton and H. H. Weissinger. 1980. Linkage relationships of 19 enzyme loci in maize. Genetics 96:697-710.

Stuber, C. W., R. H. Moll, M. M. Goodman, H. E. Schaffer and B. S. Weir. 1980. Allozyme frequency changes associated with selection for increased grain yield in maize (*Zea mays* L.). Genetics 95:225-236.

Goodman, Major M., Kathleen J. Newton and Charles W. Stuber. 1981. Malate dehydrogenase: Viability of cytosolic nulls and lethality of mitochondrial nulls in maize. Proc. Natl. Acad. Sci. USA 78:1783-1785.

Smith, J. S. C. and M. M. Goodman. 1981. A comparison of chromosome knob frequencies between sympatric and allopatric populations of teosinte and maize. Amer. J. Bot. 68:947-954.

Smith, J. S. C., M. M. Goodman and R. N. Lester. 1981. Variation within teosinte. I. Numerical analysis of morphological data. Economic Botany 35:187-203.

Goodman, M. M. 1982. Maize retraced cytogenetically. (Book review). Science 216:871-872.

Goodman, M. M., C. W. Stuber, and K. J. Newton. 1982. Isozyme loci in maize. pp. 53-60. *In* William F. Sheridan (ed.). Maize for Biological Research. North Dakota University Press.

Smith, J. S. C., M. M. Goodman, and T. A. Kato Y. 1982. Variation within teosinte. II. Numerical analysis of chromosome knob data. Economic Botany 36:100-112.

Stuber, C. W., M. M. Goodman, and R. H. Moll. 1982. Improvement of yield and ear number resulting from selection at allozyme loci in a maize population. Crop Science 22:737-740.

Weissinger, A. K., D. H. Timothy, C. S. Levings, III, W. W. L. Hu, and M. M. Goodman. 1982. Unique plasmid-like mitochondrial DNAs from indigenous maize races of Latin America. Proc. Natl. Acad. Sci. USA 79:1-5.

Brown, W. L., T. T. Chang, M. M. Goodman, and Q. Jones (eds.). 1983. Conservation of Crop Germplasm: An International Perspective. Crop Science Society of America Special Publication Number 8. 67 pages.

Doebley, J. F., M. M. Goodman and C. W. Stuber. 1983. Isozyme variation in maize from the southwestern United States: Taxonomic and anthropological implications. Maydica 28:97-120.

Goodman, M. M. 1983. Racial diversity in maize. pp. 29-40. *In* D. T. Gordon, J. K. Knoke, L. R. Nault and R. M. Ritter (eds.). Proc. Intl. Maize Virus Disease Colloquium and Workshop. The Ohio State University, Ohio Agricultural Research and Development Center, Wooster, Ohio, 266 p.

Goodman, M. M. and C. W. Stuber. 1983. Maize. *In* S. D. Tanksley and T. J. Orton (eds.). Isozymes in Plant Genetics and Breeding. Vol. 1B:1-33. Elsevier Scientific Publ.,

Amsterdam, Netherlands.

Goodman, M. M. and C. W. Stuber. 1983. Races of maize. VI. Isozyme variation among races of maize in Bolivia. Maydica 28:169-187.

Martinez W., O. J., M. M. Goodman and D. H. Timothy. 1983. Measuring racial differentiation in maize using multivariate distance measures standardized by variation in F_2 populations. Crop Science 23:775-781.

Stuber, C. W. and M. M. Goodman. 1983. Allozyme genotypes for popular and historically important inbred lines of corn. U. S. Agric. Res. Ser., Southern Series, No. 16, New Orleans. 29 p.

Stuber, C. W. and M. M. Goodman. 1983. Inheritance, intracellular localization, and genetic variation of phosphoglucomutase isozymes in maize (*Zea mays* L.). Biochemical Genetics 21:667-689.

Timothy, D. H., C. S. Levings, III, W. W. L. Hu and M. M. Goodman. 1983. Plasmid-like mitochondrial DNAs in diploperennial teosinte. Maydica 28:139-149.

Weissinger, A. K., D. H. Timothy, C. S. Levings, III, W. W. L. Hu and M. M. Goodman. 1983. Patterns of mitochondrial DNA variation in indigenous maize races of Latin America. Genetics 104:365-379.

Doebley, J. F., M. M. Goodman and C. W. Stuber. 1984. Isoenzymatic variation in *Zea* (Gramineae). Systematic Botany 9:203-218.

Goodman, M. M. 1984. An evaluation and critique of current germplasm programs. pp. 195-249 *In* 1983 Plant Breeding Research Forum Report. Pioneer Hi-Bred International, Des Moines, Iowa.

Goodman, M. M. 1984. Evaluation of exotics. Illinois Corn Breeders School Report 20:85-100.

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Goodman, M. M. and F. Castillo G. 1984. Conservacion y evaluacion de racas de maiz en America Latina. Pp. 67-84 in 1984 Proc. II Reunion Latinoamericana del Maiz. ICA, Cali, Colombia.

Smith, J. S. C., M. M. Goodman and C. W. Stuber. 1984. Variation within teosinte. III. Numerical analysis of allozyme data. Economic Botany 38:97-113.

Stuber, C. W. and M. M. Goodman. 1984. Inheritance, intracellular localization, and genetic variation of 6-phosphogluconate dehydrogenase isozymes in maize. Maydica 29:453-471.

Doebley, J. F., M. M. Goodman, and C. W. Stuber. 1985. Isozyme variation in the races of maize from Mexico. American Journal Botany 72:629-639.

Emigh, T. H. and M. M. Goodman. 1985. Multivariate analysis in nematode taxonomy. pp. 197- 204. *In* K. R. Barker, C. C. Carter, and J. N. Sasser (eds.). An Advanced Treatise on *Meloidogyne*. Volume II. Dept. of Plant Pathology, NCSU, Raleigh, N. C.

Goodman, M. M. 1985. Exotic maize germplasm: Status, prospects and remedies. Iowa State Journal of Research 59:497-527.

Goodman, M. M. 1985. Use of tropical and subtropical maize and teosinte germplasm in temperate conditionsBreeding Strategies for Maize Production Improvement. pp. 93-105. *In* A. Brandolini and F. Salamini (eds.). FAO Conference, Florence and Bergamo, Italy.

Smith, J. S. C., M. M. Goodman, and C. W. Stuber. 1985. Genetic variability within U. S. maize germplasm. I. Historically important lines. Crop Science 25:550-555.

Smith, J. S. C., M. M. Goodman, and C. W. Stuber. 1985. Genetic variability within U. S. maize germplasm. II. Widely used inbred lines 1970-1979. Crop Science 25:681-685.

Smith, J. S. C., M. M. Goodman, and C. W. Stuber. 1985. Relationships between maize and teosinte of Mexico and Guatemala: Numerical analysis of isozyme data. Economic Botany 39:12-24.

Doebley, J. F., M. M. Goodman, and C. W. Stuber. 1986. Exceptional genetic divergence of Northern Flint corn. American Journal Botany 73:64-69.

Frei, O. M., C. W. Stuber, and M. M. Goodman. 1986. Use of allozymes as genetic markers for predicting performance in maize single cross hybrids. Crop Science 26:37-42.

Frei, O. M., C. W. Stuber, and M. M. Goodman. 1986. Yield manipulation from selection on allozyme genotypes in a composite of elite corn lines. Crop Science 26:917-921.

Goodman, M. M. 1986. How should new biogenetic techniques be integrated into current improvement programs? pp. 135-138. *In* J. C. Sentz and R. P. Cantrell (eds.). On Collaboration Toward Mutual LDC Production Objectives. U. S. Universities -- CIMMYT Maize Conference Proc., CIMMYT, Mexico City. 184 p.

Wendel, J. F., C. W. Stuber, and M. D. Edwards, and M. M. Goodman. 1986. Duplicated chromosome segments in *Zea mays* L.: Further evidence from hexokinase isozymes.

Theoretical and Applied Genetics 72:178-185.

Bretting, P. K., M. M. Goodman, and C. W. Stuber. 1987. Karyological and isozyme variation in West Indian and allied American mainland races of maize. American Journal Botany 74:160-1613.

Doebley, J. F., M. M. Goodman, and C. W. Stuber. 1987. Patterns of isozyme variation between maize and Mexican annual teosinte. Economic Botany 41:234-246.

Goodman, M. M. 1987. Gene Banks and the World's Food Supply (Book review). Systematic Botany 12:449.

Goodman, M. M. 1987. pp. 3-38 *In* E. Paterniani and G. P. Viegas (eds.). History and origin of corn. Breeding and Production of Corn. Cargill Foundation, Campinas, Sao Paulo. (In Portuguese).

Goodman, M. M. 1987. The Value of Conserving Genetic Resources (Book review). American Scientist 75:204-205.

Goodman, M. M. and J. S. C. Smith. 1987. Botany (of corn). pp. 39-78 *In* E. Paterniani and G. P. Viegas (eds.), Breeding and Production of Corn. Cargill Foundation, Campinas, Sao Paulo. (In Portuguese).

Thompson, D. L., R. P. Bergquist, G. A. Payne, D. T. Bowman and M. M. Goodman. 1987. Inheritance of resistance to gray leaf spot in maize. Crop Science 27:243-246.

Castillo-Gonzalez, F., and M. M. Goodman. 1988. Agronomic evaluation of Latin American maize accessions. Crop Science 29:853-861.

Cox, T. S., J. P. Murphy, and M. M. Goodman. 1988. The contribution of exotic germplasm to American agriculture. pp. 114-144. *In* J. Kloppenburg, Jr. (ed.). Seeds and Sovereignty. Duke University Press, Durham, N. C.

Doebley, J. F., J. D. Wendel, J. S. C. Smith, C. W. Stuber, and M. M. Goodman. 1988. The origin of Cornbelt maize: The isozyme evidence. Economic Botany 42:120-131.

Goodman, M. M. 1988. The history and evolution of maize. CRC Critical Reviews in Plant Sciences 7:197-220.

Goodman, M. M. and W. L. Brown. 1988. Races of corn. pp. 33-79 *In* G. F. Sprague and J. W. Dudley (eds.). Corn and Corn Improvement -- Agronomy Monograph No. 18. Madison, Wisconsin. Agronomy Society of America.

Goodman, M. M., D. L. Thompson, and W. H. Hill. 1988. Registration of NC252, NC254, and

NC256. Crop Science 28:208.

Holley, R. N. and M. M. Goodman. 1988. Stalk quality and stalk rot resistance of tropical hybrid maize derivatives. Plant Disease 72:321-324.

Holley, R. N. and M. M. Goodman. 1988. Yield potential of tropical hybrid corn derivatives. Crop Science 28:213-217.

Stuber, C. W., J. F. Wendel, M. M. Goodman, and J. S. C. Smith. 1988. Techniques and scoring procedures for starch gel electrophoresis of enzymes from maize (*Zea mays* L.). North Carolina Agr. Res. Service Tech. Bull. 286. 87 p.

Wendel, J. F., M. M. Goodman, C. W. Stuber, and J. B. Beckett. 1988. New isozyme systems for maize (*Zea mays* L.): Aconitate hydratase, adenylate kinase, NADH dehydrogenase, and shikimate dehydrogenase. Biochemical Genetics 26:421-445.

Bretting, P. K. and M. M. Goodman. 1989. Genetic variation in crop plants and management of germplasm collections. pp. 41-54. *In* H. T. Stalker and C. Chapman (eds.). Scientific Management of Germplasm: Characterization, Evaluation and Enhancement. International Board for Plant Genetic Resources Training Courses: Lecture Series 2. IBPGR, Rome, with the Department of Crop Science, North Carolina State University, Raleigh, NC.

Bretting, P. K. and M. M. Goodman. 1989. Karyotypic variation in Mesoamerican races of maize and its systematic significance. Economic Botany 43:107-124.

Goodman, M. M., W. H. Hill, and G. A. Payne. 1989. Registration of NC258 and NC262. Crop Science 29:1334.

Holley, R. N. and M. M. Goodman. 1989. New sources of resistance to southern corn leaf blight from tropical maize derivatives. Plant Disease 73:562-564.

Holley, R. N., P. B. Hamilton, and M. M. Goodman. 1989. Evaluation of tropical maize germplasm for resistance to kernel colonization by *Fusarium moniliforme*. Plant Disease 73:578-580.

Sisco, P. H., M. M. Goodman, and D. L. Thompson. 1989. Registration of NC264 parental line of maize. Crop Science 29:248.

Wendel, J. F., C. W. Stuber, M. M. Goodman and J. B. Beckett. 1989. Duplicated plastid and triplicated cytosolic isozymes of triose phosphate isomerase in maize. Journal of Heredity 80:218-228.

Bretting, P. K., M. M. Goodman, and C. W. Stuber. 1990. Isozymatic variation in Guatemalan races of maize. American Journal Botany 77:211-225.

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Carson, M. L., M. M. Goodman, and D. A. Glawe. 1991. *Phaeosphaeria* leaf spot of maize in Florida. Plant Disease 75:968.

Eberhart, S.A., S.K. Kim, J. Mareck, L.L. Darrah, and M.M. Goodman. 1991. A comprehensive breeding system for maize improvement in Africa. *In* N.Q. Ng, P. Perino, F. Attere H. and H. Zedan (eds.). Crop Genetic Resources of Africa. Vol. II. Ebenezer Bayless, The Trinity Press, UK.

Goodman, M. M. 1991. Challenges and perspectives for future plant breeding: Uses of germplasm and molecular genetics. Revista Fitotecnia Mexicana 14:11-22.

Goodman, M. M., Hernandez-Casillas, J. M. 1991. Latin American maize collections: A case for urgent action. Diversity. 7:87-88.

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Sanchez G., J. M., and M. M. Goodman. 1992. Relationships among the Mexican races of maize. Economic Botany 46:72-85.

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Goodman, M. M. 1994. Racial sampling and identification in maize. Quantitative genetic variation versus environmental effects. pp. 89-100. *In* S. Johannessen and C.A. Hastorf (eds.), Corn and Culture in the Prehistoric New World. Westview Press, Boulder, Colorado.

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Goodman, M. M. and J. B. Holland. 1995. LAMP-type studies based upon the typical racial accessions. pp. 23 – 45. *In* R. Sevilla and S. A. Eberhart, (eds.), Latin American Maize Project (LAMP) Meeting V. Fort Collins, CO.

Goodman, M. M. 1995. Maize. pp. 192-202. *In* Evolution of Crop Plants, 2nd edition. J. Smartt and N. W. Simmonds(eds.). Longman Scientific & Technical. Essex, England

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Uhr, D. V. and M. M. Goodman. 1995. Temperate maize inbreds from tropical germplasm. I. Testcross yield trials. Crop Science 35:779-784.

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Wilkes, H.G. and M.M. Goodman. 1995. Mystery and missing links: The origin of maize. pp. 1-5. *In* S. Taba (ed.). Maize Genetic Resources. CIMMYT, Mexico, D.F.

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