

#### IV. RECENT MAIZE PUBLICATIONS

- Agble, W. K. The inheritance of maturity as measured by time of silking; and other character associations in *Zea mays*. Diss. Abstr. 15: 924. 1955. Abstr.
- Alexander, D. E. The genetic induction of autotetraploidy: A proposal for its use in corn breeding. Agron. J. 49: 40-44. 1957.
- Alldridge, N. A. and W. G. Whaley. The pattern of respiration and carbohydrate level in germinating maize. Plant Physiology Supplement 31: 33. 1956. Abstr.
- Anderson, E. G. The application of chromosomal techniques to maize improvement. Brookhaven Symp. Biol. 9: 23-37. 1956.
- Andrew, R. H. Some associations of sweet corn yield with climate and maturity. Agronomy Abstracts p. 76. 1956.
- \_\_\_\_\_, F. P. Ferwerda, and A. M. Strommen. Maturation and yield of corn as influenced by climate and production technique. Agron. Jour. 48: 231-236. 1956.
- Avila, A. Study on the content of carotene and tryptophane in commercial maizes. Rev. invest. agric. B. Aires 6: 417-423. 1952.
- Baker, R. From lines to commercial corn. Proc. 10th Ann. Hybrid Corn Industry-Research Conference 10: 14-17. 1955.
- Ball, H. J. Effect of insecticides on corn root growth. J. Econ. Entom. 49: 230-232. 1956.
- \_\_\_\_\_. Corn rootworm control for surface-planted and listed corn. J. Econ. Entom. 49: 709. 1956.
- Ballesteros, O. Q., I. S. Santos and F. A. Aquilizan. Reduction in grain yield from the  $F_1$  to the  $F_2$  of parental single crosses and double-cross hybrids. Philippine Agriculturist. In press.
- Beevers, H. Intermediates of the pentose pathway as respiratory substrates. Plant Physiology 31: 339-346. 1956.
- Bianchi, A. Defective endosperm mutants from maize-teosinte derivatives. Records of the Genetics Society of America. 25: 634. 1956. Abstr.
- \_\_\_\_\_. Defective caryopsis factors from maize-teosinte derivatives. I. Origin, description and segregation. Genetica Agraria 7: 1-38. 1957.

Bianchi, A. and A. Bottazzi. Meccanismi genetici nel tempo di fioritura in un incrocio di Zea mays. *Genetica Agraria* 5: 213-228. 1955.

Blackwood, M. The inheritance of B chromosomes in Zea mays. *Heredity* 10: 353-366. 1956.

Blanco Gonzalez, M., A. S. Veiguinha, and J. L. Blanco Gonzalez. Selection of maize lines with sweet stems and the yield of their hybrids, in relation to the dual use of the grain and plants. Results of studies made from 1951 to 1954. *Agron. lusit.* 17: 61-86. 1955.

Boothroyd, C. W., H. J. Otto, and J. M. Barnes. Stalk rot of corn in New York, 1954. U. S. D. A. Plant Disease Reporter 39: 380. 1955.

Briggle, L. W. Interaction of cytoplasm and genes in male-sterile corn crosses involving two inbred lines. *Agron. J.* 48: 569-573. 1956.

\_\_\_\_\_. A comparison of cytoplasmic-genotypic interactions in a group of cytoplasmic male sterile corn types. *Iowa St. Coll. J. Sci.* 29: 385-386. 1955. Abstr.

Brink, R. A. A regularly reversible change in determinative action of the R locus in maize. *Records of the Genetics Society of America* 25: 636. 1956. Abstr.

\_\_\_\_\_. Effect on endosperm phenotype in maize of heterozygosity at the R locus in the staminate parent. *Science* 123: 672. 1956. Abstr.

\_\_\_\_\_. A genetic change associated with the R locus in maize which is directed and potentially reversible. *Genetics* 41: 872-890. 1956.

Brunson, A. M. and J. D. Escarlos. Sweet corn in the Philippines. *Philippine Agriculturist* 39(9).

Burnham, C. R. Chromosomal interchanges in plants. *Bot. Rev.* 22: 419-552. 1956.

Campbell, A. D. Electrophoretic analyses of protein fractions extracted from an inbred and a hybrid variety of corn. *Diss. Abstr.* 16: 442-443. 1956. Abstr.

Catcheside, D. G. Double reduction and numerical non-disjunction in tetraploid maize. *Heredity* 10: 205-218. 1956.

\_\_\_\_\_. The genetics of B chromosomes in maize. *Heredity* 10: 345-352. 1956.

- Clark, J. A. Collection, preservation and utilization of indigenous strains of maize. *Econ. Bot.* 10: 194-200. 1956.
- Cleland, R. E. Report of the committee on preservation of indigenous strains of maize. *Proc. 3rd Ann. Meeting Agr. Res. Inst. Nat. Acad. Sci.-Nat. Res. Counc.* 1954: 36-37 and *Proc. 4th Ann. Meeting* 1955: 28.
- Clem, M. A., C. C. Mosier, and G. F. Sprague. Simplified punched card procedures for predicting double cross performance. *Agron. J.* 48: 319-320. 1956.
- Cockerham, C. C. Analysis of quantitative gene action. *Brookhaven Symp. Biol.* 9: 53-68. 1956.
- Comstock, R. E. Theory of quantitative genetics: Synthesis. *Cold Spring Harbor Symp. Quant. Biol.* 20: 93-102. 1955.
- and H. F. Robinson. Findings relative to reciprocal recurrent selection. *Proc. Int. Genetics Symp. in Tokyo and Kyoto, Japan.* 1956.
- Crane, P. Factors affecting resistance to Pythium seedling blight of maize incited by Pythium ultimum. *Agron. J.* 48: 365-368. 1956.
- Curtis, J. J., A. M. Brunson, J. E. Hubbard, and F. R. Earle. Effect of the pollen parent on oil content of the corn kernel. *Agron. J.* 48: 551-555. 1956.
- Dios, R. and G. Dios. Content of macro- and micro-nutrients in the grain of some maize hybrids cultivated in Galicia. *An. Edafol. Fisiol. Veg.* 15: 231-252. 1956.
- Duvick, D. N. Allelism and comparative genetics of fertility restoration of cytoplasmically pollen sterile maize. *Genetics* 41: 544-565. 1956.
- Edwardson, J. R. Cytoplasmic male-sterility. *Bot. Rev.* 22: 696-738. 1956.
- Ellis, B. G., C. J. Knauss, and F. W. Smith. Nutrient content of corn as related to fertilizer application and soil fertility. *Agron. J.* 48: 455-460. 1956.
- Emmerling, M. H. Unequal crossing over between elements of the R complex in Zea mays. *Records of the Genetics Society of America* 25: 641. 1956. Abstr.
- Everett, H. L., R. G. Wiggans, and H. J. Otto. An Adapted field corn hybrid produced the easy way. *Farm research* 22: 2. 1956.

Faberge, A. C. The analysis of induced chromosome aberrations by maize endosperm phenotypes. Z. indukt. Abstamm.- u. VererbLehre 87: 392-420. 1956.

\_\_\_\_\_. Forecasting the rate of induced marker loss for maize endosperm. Records of the Genetics Society of America 25: 642. 1956. Abstr.

Ferwerda, F. P. Monoploids as a starting point for homozygous lines in maize. Erfelijkh. i. Prakt. 16: 5-6. 1955.

Fleming, A. A., T. H. Rogers and T. A. Bancroft. Field plot technique with hybrid corn under Alabama conditions. Agron. J. 49: 1-4. 1957.

Floyd, E. H. and L. D. Newsom. Protection of stored corn with lindane-impregnated sawdust. J. Econ. Entom. 49: 753-756. 1956.

Fradkin, C. W. and R. A. Brink. Effect of modulator on the frequency of endosperm mosaics in maize. Amer. Jour. Bot. 43: 267-273. 1956.

\_\_\_\_\_ and \_\_\_\_\_. Crossing over in maize in the presence of the transposable factors Activator and Modulator. Genetics 41: 901-907. 1956.

Freeman, W. H. Evaluating hybrids in the south. Proc. 10th Ann. Hybrid Corn Industry-Research Conference 10: 24-31. 1955.

French, O. C., R. G. Wiggans, H. L. Everett, and R. B. Musgrave. Researchers study ear corn storage. Farm Research 21: 14. 1955.

Genter, C. F., Eheart, J. F. and Linkous, W. N. Effects of location, hybrid, fertilizer and rate of planting on the oil and protein contents of corn grain. Agron. J. 48: 63-67. 1956.

Gingrich, J. R. and M. B. Russell. Effect of soil moisture tension and oxygen concentration on the growth of corn roots. Agron. J. 48: 517-521. 1956.

Gopinath, D. M. and C. R. Burnham. A cytogenetic study in maize of deficiency-duplication produced by crossing interchanges involving the same chromosomes. Genetics 41: 382-395. 1956.

Gosi, L. Il Mais della varietà culturale "Precoce di Bagnolo". Genetica Agraria 5: 1-44. 1955.

Grogan, C. O. Detasseling responses in corn. Agron. J. 48: 247-249. 1956.

\_\_\_\_\_ and M. S. Zuber. Missouri Hybrid Popcorn Yield Trials. Univ. of Mo. Coll. of Agric. Exp. Sta. Bul. 671. 1956.

Grogan, C. O. and M. S. Zuber. A comparative study of topcross tester parents of maize. *Agron. J.* 49: 68-72. 1957.

Haines, R. G. Evidence of lindane translocation in corn plants. *J. Econ. Entom.* 49: 563-564. 1956.

Harada, K., M. Murakami, A. Fukushima and M. Nakazima. Studies on the breeding of forage crops. I. Studies on intergeneric hybridization between Zea and Coix. *Saikyo Daigaku Gakujutsu Hokoku, Nogaku/Sci. Rep. Saikyo Univ., Agric.* 6: 139-145. 1954.

Harvey, P. H., D. L. Thompson, and T. T. Hebert. Reaction of inbred lines of corn to brown spot. *Plant Dis. Repr.* 39: 973-976. 1955.

Haskell, G. Internode patterns, adaptation and the origins of sweetcorn. *Genetica* 28: 308-344. 1956.

Haynes, J. L. and J. D. Sayre. Response of corn to within-row competition. *Agron. J.* 48: 362-365. 1956.

Hoen, K. and R. H. Andrew. Osmotic value of germinating corn. *Agronomy Abstracts* p. 78. 1956.

Hooker, A. L. Correlation of resistance to eight Pythium species in seedling corn. *Phytopath.* 46: 175-176. 1956.

~~Horner, E. S., Fred H. Hull, W. H. Chapman, and H. W. Lundy.~~ Association of resistance to several seedling, root, stalk and ear diseases in corn. *Phytopath.* 46: 379-384. 1956.

Horner, E. S., Fred H. Hull, W. H. Chapman, and H. W. Lundy. Progress report on recurrent selection for specific combining ability in corn. *Proceedings Southern Agricultural Workers, Louisville*, 52: 36-37. 1955.

Hume, A. W., V. A. Dirks and D. B. Shank. Date and rate of corn planting. *So. Dak. Agr. Expt. Sta. Bull.* 455. 1956.

Jones, D. F. Genic and cytoplasmic control of pollen abortion in maize. *Brookhaven Symp. Biol.* 9: 101-113. 1956.

Jugenheimer, R. W. Hybrid maize and sorghum in the Punjab of India. *Ill. Agr. Exp. Sta. Mimeo.* 1956.

~~and A. F. Troyer.~~ Experimental corn hybrids tested in 1955. *Ill. Agr. Exp. Sta. Bul.* 597. 1956.

~~and K. E. Williams.~~ Experimental corn hybrids tested in 1956. *Ill. Agr. Exp. Sta. Bul.* 606. 1957.

Kay, R. E. and B. O. Phinney. Plastid changes in the early seedling leaves of *Zea mays* L. *Plant Physiology* 31: 226-230. 1956.

                 and                 . The control of plastid pigment formation by a virescent gene, pale-yellow-1, of maize. *Plant Physiology* 31: 415-419. 1956.

Konzak, C. F. and W. R. Singleton. The effects of thermal-neutron radiation on mutation of endosperm loci in maize. *Proc. Nat. Acad. Sci.* 42: 78-83. 1956.

                 and                 . The mutation of linked maize endosperm loci induced by thermal-neutron, x-, gamma, and ultraviolet radiation. *Proc. Nat. Acad. Sci.* 42: 239-244. 1956.

Kramer, H. H., R. L. Whistler and E. G. Anderson. A new gene interaction in the endosperm of maize. *Agron. J.* 48: 170-172. 1956.

Lang, A. L., J. W. Pendleton and G. H. Dungan. Influence of population and nitrogen levels on yield and protein and oil contents of nine corn hybrids. *Agron. J.* 48: 284-289. 1956.

Leone, I. A., E. Brennan and R. H. Daines. Atmospheric fluoride: its uptake and distribution in tomato and corn plants. *Plant Physiology* 31: 329-333. 1956.

Longley, A. E. The origin of diminutive B-type chromosomes in maize. *Amer. Jour. Bot.* 43: 18-21. 1956.

Lonnquist, J. H. and D. P. McGill. Performance of corn synthetics in advanced generations of synthesis and after two cycles of recurrent selection. *Agron. J.* 48: 249-253. 1956.

Manrique Chavez, A. and A. Grobman. Duration of receptivity of the pistillate spikelets in maize and the factors that affect it. *Agronomia, Lima* 20: 50-58. 1955.

Mazoti, L. B. Spontaneous hereditary variation in maize. *Rev. invest. Agric. B. Aires* 6: 1-27. 1952.

Mehrotra, H. N. Inheritance of foliage leaf number in maize. *Diss. Abstr.* 15: 315-317. 1955. *Abstr.*

Mesa Bernal, D. Where did maize originate? V. and VI. *Agric. trop.* 11: 941-946 and 12: 87-90. 1956.

                . Geological, archeological and botanical information on the origin of maize. *Agric. trop.* 12: 229-240. 1956.

- Mesa Bernal, D. The origin of maize in Mexico and Guatemala. Agric. trop. 12: 287-298. 1956.
- Morgan, D. T. Asynapsis and plasmoidal microsporocytes in maize following x-irradiation of the pollen. Jour. Hered. 47: 269-274. 1956.
- Moschini, E. Water consumption and root system of maize. Ann. Fac. Agr. Pisa 16: 209-230. 1955.
- Nakamura, N. and S. Tate. Estimation of the number and values of the genes determining combining ability in maize and of the heritability of combining ability. Jap. J. Breeding 6: 46050. 1956.
- Neal, N. P. and J. R. Davis. Seed viability of corn inbred lines as influenced by age and condition of storage. Agron. J. 48: 383-384. 1956.
- Nelson, R. R. Resistance to the stunt nematode in corn. Plant Dis. Rept. 40: 635-639. 1956.
- Newlin, O. J. Inheritance of fertility restoration in cytoplasmic male-sterile Zea mays. Diss. Abstr. 15: 1478. 1955.
- Otto, H. J. and H. L. Everett. Influence of nitrogen and potassium fertilization on the incidence of stalk rot of corn. Agron. Jour. 48: 301-305. 1956.
- Penny, L. H. and F. F. Dicke. Inheritance of resistance in corn to leaf feeding of the European corn borer. Agron. J. 48: 200-203. 1956.
- Pfahler, P. L., H. H. Kramer and R. L. Whistler. Effect of genes on birefringence end-point temperature of starch grains in maize. Science 125: 441-442. 1957.
- Phinney, B. O. Biochemical mutants in maize: Dwarfism and its reversal with gibberellins. Plant Physiology Supplement 31: 20. 1956. Abstr.
- . Growth response of single-gene dwarf mutants in maize to gibberellic acid. Proc. Nat. Acad. Sci. 42: 185-188. 1956.
- Picklum, W. E. Histological and cytological changes in the maize embryo during germination. Iowa St. Coll. J. Sci. 29: 479-480. 1955. Abstr.
- Pirovano, A. Effects of competition between pollen of dominant and recessive types in hybrid maize. Ann. Sper. Agr. 10: 539-543. 1956.
- Rahman, O. and A. H. Brown. Some phenotypic effects of single gene mutations on respiratory characteristics of maize leaf tissue. Plant Physiology 31: 408-410. 1956.

Rhoades, M. M. Lewis John Stadler. Genetics 41: 1-3. 1956.

Richardson, D. L. The analysis of a compound locus in maize as revealed by genic instability. Diss. Abstr. 16: 220-221. 1956. Abstr.

Robinson, H. F. and R. E. Comstock. Analysis of genetic variability in corn with reference to probable effects of selection. Cold Spring Harbor Symp. Quant. Biol. 20: 127-136. 1955.

\_\_\_\_\_, \_\_\_\_\_. A. Khalil and P. H. Harvey. Dominance versus over-dominance in heterosis: evidence from crosses between open-pollinated varieties of maize. Amer. Nat. 90: 127-132. 1956.

Robinson, R. G. and R. S. Dunham. Spray placement in corn after layby. Agron. J. 48: 35-37. 1956.

Rossmann, E. C. The stand problem. Proc. 10th Ann. Hybrid Corn Industry-Research Conference 10: 18-23. 1955.

Rubis, D. D. Inheritance of resistance in corn to the European corn borer and to diplodia stalk rot. Iowa St. Coll. J. Sci. 29: 489-490. 1955. Abstr.

Russell, M. B. and R. E. Danielson. Time and depth patterns of water use by corn. Agron. J. 48: 163-166. 1956.

Sayed Galal Sayed. Heterosis in corn; and the role of photosynthesis in the development of *Puccinia sorghi* Schw. Diss. Abstr. 16: 216. 1956. Abstr.

Schuler, J. F. and G. F. Sprague. Natural mutations in inbred lines of maize and their heterotic effect. II. Comparisons of mother line vs. mutant when outcrossed to unrelated inbreds. Genetics 41: 281-291. 1956.

Schwartz, D. Studies on crossing over in maize and *Drosophila*. Oak Ridge Symposium on genetic recombination. J. Cell Comp. Physiol. 45: Suppl. 2: 171-188. 1955.

\_\_\_\_\_ and C. E. Bay. Further studies on the reversal in the seedling height curve at very high levels of ionizing radiations. Amer. Nat. 90: 323-326. 1956.

Shams-ul-Islam Khan. Theoretical aspects of crossing over in T 5-6c in corn, *Zea mays* L. Cellule 56: 309-327. 1954.

\_\_\_\_\_. Effect of temperature on crossing over in heterozygous T 5-6c with homozygous inversion in chromosome 5 in maize. Cytologia, Tokyo 20: 150-156. 1955.

- Shams-ul-Islam Khan. Effect of temperature on crossing over in heterozygous T 5-6c with normal chromosome 5 in maize. *Beitr. Biol. Pfl.* 32: 171-183. 1956.
- Silva, J. B. Vieira da. Leaf blight and yield in S<sub>1</sub> inbreds of two varieties of maize. *S. Afr. J. Sci.* 52: 226. 1956.
- Singleton, W. R. Mutation breeding. *Proc. 10th Ann. Hybrid Corn Industry-Research Conference* 10: 32-40. 1955.
- Sirks, M. J. A genetical puzzle. *Acta bot. neerl.* 4: 471-473. 1955.
- Smith, R. C. Movement of phosphate into the xylem of corn roots. *Plant Physiology Supplement* 31: 6. 1956. Abstr.
- Sprague, G. F. Problems in the estimation and utilization of genetic variability. *C.S.H.S.Q.B.* 20: 87-93. 1955.
- \_\_\_\_\_. Replication versus location. *Proc. 10th Ann. Hybrid Corn Industry-Research Conference* 10: 10-13. 1955.
- \_\_\_\_\_. Corn genetics. Proceedings of the fourth annual meeting of the Agricultural Research Institute. *Nat. Acad. Sci.-Nat. Res. Counc.* 1955: 60-65.
- Stadler, J. K. An analysis of instability at the R locus in maize. *Diss. Abstr.* 16: 435-436. 1956. Abstr.
- Stadler, L. J. and M. H. Emmerling. Relation of unequal crossing over to the interdependence of Rr elements (P) and (S). *Genetics* 41: 124-137. 1956.
- Stein, O. L. The rates of leaf initiation in two dwarfing genes, dwarf-1 and brachytic-2 in *Zea mays* L. *Diss. Abstr.* 15: 325-326. 1955. Abstr.
- Stowe, B. B., K. V. Thimann and N. P. Kefford. Further studies of some plant indoles and auxins by paper chromatography. *Plant Physiology* 31: 162-164. 1956.
- Stringfield, G. H. Introduction to "techniques in evaluating hybrids". *Proc. 10th Ann. Hybrid Corn Industry-Research Conference* 10: 7-9. 1955.
- Sutô, T. A list of genes in maize (Japanese). *Handbook of Genetics (Jap.)* 200-225. 1956.
- \_\_\_\_\_. and Y. Yoshida. Characteristics of oriental maize. *Land and Crops of Nepal Himalaya* 2: 373-530. 1956.

Tavčar, A. Heritable proliferation of tassels, a viviparism in *Zea mays* L., and its cytological basis. *Caryologia* Vol. Suppl. 1954.

\_\_\_\_\_. Methods of breeding hybrid maize in Yugoslavia. *Agronomski Glasnik*. 1955.

\_\_\_\_\_. Heterosis in theory and practice. *Soc. scientiarum nat. Croatica*. 1955.

\_\_\_\_\_. Somatic mutation of endosperm from indentata to indurata in *Zea mays* L. and the mode of inheritance. *Soc. scientiarum nat. Croatica*. 1955.

\_\_\_\_\_. Combining ability of some Yugoslav inbred lines of maize. *Plant Production*, Zagreb. 1956.

Thomas, W. Effect of plant population and rates of fertilizer nitrogen on average weight of ears and yield of corn in the south. *Agron. J.* 48: 228-231. 1956.

\_\_\_\_\_. and I. J. Johnson. Inheritance of pollen restoration and transmission of cytoplasmic sterility in popcorn. *Agron. J.* 48: 472-475. 1956.

Urano, K. Studies on the diagnosis of relationships between maize strains using the precipitin reaction. I. On the precipitin reaction between inbred lines of maize. *Proc. Crop Sci. Soc. Japan* 24: 4-7. 1955.

\_\_\_\_\_. and K. Odogiri. Studies on the diagnosis of relationships between maize strains using the precipitin reaction. II. On protein constitution in relation to serum reaction. *Proc. Crop Sci. Soc. Japan*. 24: 7-8. 1955.

\_\_\_\_\_, Y. Tanaka and S. Kiyosawa. Genecological studies on maize. II. On varietal differences in the content of growth hormone in the maize coleoptile. *Proc. Crop Sci. Soc. Japan* 23: 110-115. 1954.

Wallace, H. A. Public and private contributions to hybrid corn--past and future. *Proc. 10th Ann. Hybrid Corn Industry-Research Conference* 10: 107-115. 1955.

\_\_\_\_\_. and W. L. Brown. Corn and its early fathers. *Mich. State Univ. Press* 1956.

Warren, L. O. Behavior of Angoumois grain moth on several strains of corn at two moisture levels. *J. Econ. Entom.* 49: 316-319. 1956.

Waterhouse, W. L. Australian rust studies. XIV. Investigations of rust of maize caused by *Puccinia sorghi* Schw. *Proc. Linn. Soc. NSW* 80: 138-141. 1955.

- Wellwood, A. A. and L. F. Randolph. Inheritance of differences in pachytene chromosome configuration in maize. Amer. Jour. Bot. 44.
- West, C. A. and B. O. Phinney. Properties of gibberellin-like factors from extracts of higher plants. Plant Physiology Supplement 31: 20. 1956. Abstr.
- Whiteley, J. R. Cross incompatability in maize. Iowa St. Coll. J. Sci. 29: 530-531. 1955. Abstr.
- Wood, D. R. and R. A. Brink. Frequency of somatic mutation to self color in maize plants homozygous and heterozygous for variegated pericarp. Proc. Nat. Acad. Sci. 42: 514-518. 1956.
- Zuber, M. S. and W. L. Decker. Effects of 1954 drought on corn. Univ. of Mo. Coll. of Agric. Res. Bul. 604. 1956.
- \_\_\_\_\_ and C. O. Grogan. Hybrid seed corn production. Mo. Agric. Exp. Sta. Bul. 674. 1956.
- \_\_\_\_\_ and \_\_\_\_\_. Corn hybrids for Missouri. Mo. Agric. Exp. Sta. Bul. 673. 1956.
- \_\_\_\_\_ and \_\_\_\_\_. Rates of planting studies of corn. Univ. of Mo. Coll. of Agric. Res. Bul. 610. 1956.
- \_\_\_\_\_ and \_\_\_\_\_. Missouri hybrid corn yield trials for 1956. Mo. Agric. Exp. Sta. Bul. 682. 1956.