

Stocks of A-B chromosome translocations

|       |        |   |
|-------|--------|---|
| B-1a  | 1L.2   | Proximal to <u>Hm</u>                               |
| B-1b  | 1S.05  |   |
| B-3a  | 3L.1   |   |
| B-4a  | 4S.25  | Proximal to <u>su</u> <sub>1</sub>                  |
| B-7b  | 7L.3   | Proximal to <u>ra</u> <sub>1</sub>                  |
| B-9a  | 9L.5   | Proximal to <u>Bf</u> <sub>1</sub>                  |
| B-9b  | 9S.4   | Between <u>C</u> and <u>wx</u> ; close to <u>wx</u> |
| B-10a | 10L.35 | Proximal to <u>g</u> <sub>1</sub>                   |

## IV. RECENT MAIZE PUBLICATIONS

- Aala, F. T. The corn leaf blight disease: a problem in the production of hybrid corn seed involving cytoplasmic male sterility. Philipp. J. Pl. Industr. 29:115-122. 1964.
- Abraham, S. and H. H. Smith. DNA synthesis in maize B chromosomes. J. Hered. 57:78-80. 1966.
- Alexandrescu, V. Electrophoretic behavior of soluble proteins in germs of various maize species. Rev. Roumain. Biochim. 1:275-278. 1964. (Rumania)
- Alvey, D. D. and J. R. Hamilton. Effect of genetic background on the lysine content of corn endosperm homozygous for opaque-2 gene. Abstr. Amer. Soc. Agron. 1966:3. 1966. (Abstr.)
- Amano, E. and H. H. Smith. Mutations induced by ethyl methanesulfonate in maize. Mutation Res. 2:344-351. 1965.
- Angeles, H. H. Ontogenetic study of the vegetative shoot apex of corn grass a mutant in maize. Genetics 54:317. 1966. (Abstr.)
- Axtell, J. D. High sensitivity of paramutant R' alleles in maize to the action of diethyl sulfate. Genetics 54:318. 1966. (Abstr.)
- Bachmann, M. D., D. S. Robertson, and C. C. Bowen. Developmental changes in the fine structure of chloroplasts in etiolated leaves of Zea mays. Amer. J. Bot. 53:603. 1966. (Abstr.)
- Bailey, R. W. and W. Z. Hassid. Xylan synthesis from uridine-diphosphate-d-xylose by particulate preparations from immature corncobs. P.N.A.S. 56:1586-1594. 1966.
- Baranovskij, P. M. and E. I. Garms. Question on the biochemical basis of heterosis. Rep. Agric. Sci. 7:3-6. 1963. (Russian)
- Beckett, J. B. Inheritance of partial male fertility in maize in the presence of Texas sterile cytoplasm. Crop Sci. 6:183-184. 1966.
- BeMiller, J. N. and A. J. Pappelis. 2,4-Dihydroxy-7-methoxy-1,4-benzoxazin-3-one glucoside in corn. I. Relation of water-soluble, 1-butanol-soluble glycoside fraction content of pith cores and stalk rot resistance. Phytopath. 55:1237-1240. 1965.
- Bianchi, A. and M. R. Parlavecchio. Calculation of crossing over between gametophyte factors and markers on chromosome 9 in maize. Maydica, Bergamo 11: 72-86. 1966.
- Bianchi, A. and C. Tomassini. Reversion frequency of waxy pollen type in normal and hypoploid maize plants. Mutation Res. 2:352-365. 1965.

- Black, R. C., J. D. Loerch, F. J. McArdle and R. G. Creech. Genetic interactions affecting maize phytoglycogen and the phytoglycogen-forming branching enzyme. *Genetics* 53:661-668. 1966.
- Blumenschein, A. Identification of chromosome segments that contribute to the specificity of racial characteristics in maize. Diss. Abstr. 26:645-646. 1965. (Abstr.)
- Bodea, C. and T. Laszlo. Studies on particular biochemical characteristics of maize. IV. The redox potential of hybrid seed showing and not showing heterosis. *Rev. Roumain. Biochim.* 1:251-253. 1964. (Rumania)
- Bodea, C., C. Bilaus, T. Laszlo and I. Cabulea. Studies on particular biochemical characteristics of maize. V. The reduced and oxidized glutathione content of hybrid seed and seedlings. *Rev. Roumain. Biochim.* 1:255-260. 1964. (Rumania)
- Borghi, B. and F. Salamini. Genetical analysis of glossy mutants in maize. I. Frequency for the different loci. *Maydica, Bergamo* 11:45-57. 1966.
- Bray, R. A. and R. A. Brink. Mutation and paramutation at the R locus in maize. *Genetics* 54:137-149. 1966.
- Brewbaker, J. L. and F. Aquilizan. Genetics of resistance in maize to a mosaic-stripe virus transmitted by Peregrinus maidis. *Crop Sci.* 5:412-415. 1965.
- Briggs, R. W. Recognition and classification of some genetic traits in maize. *J. Hered.* 57:35-42. 1966.
- Briggs, R. W. Genetic recombination among ethyl methanesulfonate induced and standard waxy mutants in Zea mays. *Genetics* 54:324-325. 1966. (Abstr.)
- Brown, D. F. Paramutability of R<sup>G</sup> and r<sup>F</sup> mutant genes derived from an R<sup>F</sup> allele in maize. *Genetics* 54:899-910. 1966.
- Brown, R. P. Genetic control of starch granule development in maize endosperm. M. S. Thesis in Horticulture, The Pennsylvania State University. 1966.
- Brown, W. L. Physical characteristics of corn of the future. *Proc. 20th Ann. Hybrid Corn Ind.-Res. Conf.* 20:7-16. 1965.
- Bruce, R. R., J. O. Sanford and D. L. Myhre. Soil water and nitrogen influence on growth and fruiting of a cytoplasmic male-sterile corn hybrid and its fertile counterpart. *Agron. J.* 58:631-635. 1966.
- Buican, D. Cold-resistance in maize and the problem of its genetic transmission. *Rev. Roum. Biol.* 10:327-335. 1965. (Rumania)

- Buican, D. New data on the study of the transmittance of drought resistance to double hybrids of maize and the role of heterosis in this process. *Genetika, Moskva* 1966:82-88. 1966 (Russian)
- Cabulea, I. Some aspects of photoperiod reaction in maize hybrids compared with inbred parental lines. *Anal. Inst. Cerc. Cereal. Pl. Teh. Fundulea* 31: 183-191. 1963. (Rumania)
- Calyk, T. S. Creation of sterile analogues of maize by means of androgenesis. *Genetika Moskva* 1965: 135-141. 1965. (Russian)
- Cameron, J. W. and L. D. Anderson. Husk tightness, earworm egg numbers, and starchiness of kernels in relation to resistance of corn to the corn earworm. *J. Econ. Ent.* 59: 556-558. 1966.
- Campbell, C. M. New dwarfs and modifiers. *Proc. 20th Ann. Hybrid Corn Ind.-Res. Conf.* 20: 22-30. 1965.
- Caspar, A. L. Dominant phenotype induced in homozygous recessive proembryos by gamma radiation. *Genetics* 54: 326. 1966. (Abstr.)
- Chandramouli. Cytological behavior of a B chromosome in Zea mays L. *Proc. 54th Ind. Sci. Congr. Part III. Abstr. No. 276, p. 393.* 1967.
- Chang, S. T. Genetic studies of "cold test" reaction in maize. *Bot. Bull. Acad. Sin., Taipei* 7: 88-100. 1966.
- Chase, S. S. and Nanda, D. K. Leaf number and maturity, and the effect of latitude, day length and temperature on these traits in maize (Zea mays L.). *Abstr. Amer. Soc. Agron.* 1966: 4. 1966. (Abstr.)
- Clowes, F. A. L. The duration of the G<sub>1</sub> phase of the mitotic cycle and its relation to radiosensitivity. *New Phytol.* 64: 355-359. 1965.
- Clowes, F. A. L. Synchronization in a meristem by 5-aminouracil. *J. Exp. Bot.* 16: 581-586. 1965.
- Cochran, D. E. and W. A. Russell. Genetic variability of quantitative characters within an inbred line of maize. *Iowa State Jour. Sci.* 41: 145-164. 1966.
- Coe, E. H., Jr. The properties, origin, and mechanism of conversion-type inheritance at the B locus in maize. *Genetics* 53: 1035-1063. 1966.
- Coe, E. H., Jr. Liquid media suitable for suspending maize pollen before pollination. *Proc. Mo. Acad. Sci.* 3: 7-8. 1966. (Abstr.)
- Coe, E. H., Jr. and K. R. Sarkar. Preparation of nucleic acids and a genetic transformation attempt in maize. *Crop Sci.* 6:432-435. 1966.



- Comstock, R. E. Selection procedures in corn improvement. Proc. 19th Ann. Hybrid Corn Ind.-Res. Conf. 19: 87-94. 1964.
- Crane, P. L., E. Diaz B., J. A. Rivera G., and J. C. Toro M. Stalk strength of strains of maize of Colombia, Ecuador, and Venezuela as measured by rind thickness. Crop Sci. 6: 210-211. 1966.
- Creech, R. G. Breeding experiments seek high sugar content in corn. Sci. Fmr. Pa. 13: 8-9. 1966.
- Creech, R. G. and F. J. McArdle. Gene interaction for quantitative changes in carbohydrates in maize kernels. Crop Sci. 6: 192-194. 1966.
- Creech, R. G. Application of biochemical genetics in quality improvement and plant nutrition. I. Genetic mutations affecting carbohydrate properties in maize endosperm. Qualitas Plantarum et Material Vegetabiles 13: 86-97. 1966.
- Crumpacker, D. W. Inheritance of chlorophyll deficiencies in maize. Col. St. Univ. Tech. Bul. 94. 1966.
- Crumpacker, D. W. Allelism and overdominance of chlorophyll genes in maize. Genetics 54: 1307-1314. 1966.
- Daniel, L. A study of general and specific combining ability in the diallel crosses of 18 sweet corn varieties (*Zea mays* L. convar. *saccharata* Korn). Acta Agron. Hung. 14: 1-14. 1965. (Hungary)
- Daniel, L. The inheritance of some quantitative characters in the cross of two four-rowed lines of corn (*Zea mays* L.). Acta Biol. Budapest 16: 175-183. 1965.
- Das, N. K. Inactivation of the nucleolar apparatus during meiotic prophase in corn anthers. Exp. Cell Res. 40: 360-364. 1965.
- Diboll, A. G. and D. A. Larson. An electron microscopic study of the mature megagametophyte in *Zea mays*. Amer. J. Bot. 53: 391-403. 1966.
- Dollinger, E. J., W. R. Findley, and L. E. Williams. Negative evidence for mutagenic activity of the maize dwarf mosaic virus in maize. Crop Sci. 6: 496-497. 1966.
- Eberhart, S. A. and C. O. Gardner. A general model for genetic effects. Biometrics 22: 864-882. 1966.
- Eberhart, S. A. and W. A. Russell. Stability parameters for comparing varieties. Crop Sci. 6: 36-40. 1966.
- Eberhart, S. A., R. H. Moll, H. F. Robinson and C. C. Cockerham. Epistatic and other genetic variances in two varieties of maize. Crop Sci. 6: 275-280. 1966.

- Edwardson, J. R. Radiosensitivity in maize seed influenced by cytoplasmic factors. Radiation Bot. 5: 53-59. 1965.
- El-Eryani, A. A. and A. A. Fleming. Seedling and biochemical differences within a long-time maize (*Zea mays* L.) inbred. Crop Sci. 6: 31-32. 1966.
- El-Ghawas, M. I. Interrelations of gamma ray dose, germination, survival, and growth rates in diploid and autotetraploid stocks of maize. Alexandria J. Agric. Res. 12: 81-101. 1964.
- El-Rouby, M. M. and W. A. Russell. Locating genes determining resistance to *Diplodia maydis* in maize by using chromosomal translocations. Canad. Jour. Genet. Cyt. 8: 233-240. 1966.
- Endo, T. and D. Schwartz. Tissue specific variations in the urea sensitivity of the  $E_1$  esterase in maize. Genetics 54: 233-239. 1966.
- Faludi-Daniel, A. and F. Lang. The formation of carotenoid content in the grains of maize mutants. Acta Agron. Hung. 14: 203-207. 1965.
- Ferguson, V. L. Inheritance of *Diplodia* stalk rot resistance and the interrelation of ear and stalk rot in maize. Diss. Abstr. 25: 3802-3803. 1965. (Abstr.)
- Ferguson, V. L., J. L. Helm and M. S. Zuber. Gene dosage effects at the *ae* locus on amylose content of corn endosperm. J. Hered. 57: 90, 94. 1966.
- Ferguson, V. L., J. L. Helm and M. S. Zuber. Effect of kernel position on amylose within corn endosperm (*Zea mays* L.) Crop Sci. 6: 273-275. 1966.
- Fitzgerald, P. J. and E. E. Ortman. Breeding for resistance to western corn rootworm. Proc. 19th Ann. Hybrid Corn Ind.-Res. Conf. 19: 46-60. 1964.
- Fleming, A. A. Effects of seed age, producer, and storage on corn (*Zea mays* L.) production. Agron. J. 58: 227-228. 1966.
- Fleming, A. A. and J. B. Campbell. Effects of male cytoplasm in a double-cross maize hybrid. Abstr. Amer. Soc. Agron. 1966: 6. 1966. (Abstr.)
- Franklin, R. T. and F. G. Holdaway. A relationship of the plant to parasitism of European corn borer by the tachnid parasite *Lydella grisescens*. J. Econ. Ent. 59: 440-441. 1966.
- Gardner, C. O. and S. A. Eberhart. Analysis and interpretation of the variety cross diallel and related populations. Biometrics 22: 439-452. 1966.

Gr 222

- and J. H. Lonquist. Statistical genetic theory and processes useful in studying varieties and intervarietal crosses. In Heterosis in Intervarietal Crosses of Maize, pp. 6. International Maize and Wheat Improvement Center Res. No. 2. 1966.
- Gelina, A., S. N. Postlethwait and L. F. Bauman. Developmental studies in the Zea mays mutant clumped tassel (Ct). Amer. J. Bot. 53: 615. 1966. (Abstr.)
- Genter, C. F. and M. W. Alexander. Recurrent selection for S<sub>1</sub> progeny yield in corn (Zea mays L.). Abstr. Amer. Soc. Agron. 1966: 6. 1966. (Abstr.)
- Ghatnekar, M. V. Heterochromatic knobs in Italian maize population and the evolution of maize in Italy. Cytologia 30:402-425. 1965.
- Ghatnekar, M. V. Spontaneous chromosome aberrations and abnormal behaviors in Italian maize populations. Cytologia 30: 426-436. 1965.
- Goodman, M. The history and origin of maize. Current theories of the relationships between maize and some of its relatives. Tech. Bull. N. C. Agric. Exp. Sta. No. 170, pp. 25. 1965.
- Gorsline, G. W., D. E. Baker and W. I. Thomas. Accumulation of eleven elements by field corn (Zea mays L.) Bull. Pa. Agric. Exp. Sta. No. 725. pp. 31. 1965.
- Grant, V. Block inheritance of viability genes in plant species. Amer. Nat. 100: 591-603. 1966.
- Grogan, C. O. Breeding high-xanthophyll corn. Proc. 19th Ann. Hybrid Corn Ind.-Res. Conf. 19: 105-111. 1964.
- Grogan, C. O., W. A. Douglas and E. E. Rosenkranz. Research helps to halt spread of corn stunt. Miss. Fm. Res. 29: 1-2, 6. 1966.
- Grogan, C. O., E. E. Rosenkranz, W. A. Douglas and L. Mason. Seek resistance to corn stunt. Miss. Fm. Res. 28: 1-2. 1965.
- Hallauer, A. R. Development of single-cross hybrids from two-eared maize populations. Abstr. Amer. Soc. Agron. 1966: 7. 1966. (Abstr.)
- Hallauer, A. R. and S. A. Eberhart. Evaluation of synthetic varieties of maize for yield. Crop Sci. 6: 423-427. 1966.
- Hallauer, A. R. and J. H. Sears. Influences of time of day and silk treatment on seed set in maize. Crop Sci. 6: 216-218. 1966.
- Hanson, G. P. Some studies of crossing over in maize as influenced by accessory chromosomal elements. Diss. Abstr. 26: 2424-2425. 1965.
- Helm, J. L., V. L. Ferguson, and M. S. Zuber. Development of high-amylose corn (Zea mays L.) by the backcross method. Abstr. Amer. Soc. Agron. 1966: 7. 1966. (Abstr.)
- Hilty, J. W. and L. M. Josephson. The new corn virus disease in Tennessee. Tenn. Farm and Home Sci. 57: 4-6. 1966.
- Hilty, J. W. and L. M. Josephson. Maize dwarf mosaic in Tennessee. Plant Dis. Repr. 50: 427-428. 1966.
- Homan, M. D. and R. M. Harris. The effects of gibberellin on the dwarf coleoptile of maize. J. Ariz. Acad. Sci. 3: 169-171. 1965.
- Ikenaga, M. and T. Mabuchi. Photoreactivation of endosperm mutations induced by ultraviolet light in maize. Radiation Bot. 6: 165-169. 1966.
- Irnazarov, I. and F. L. Kalinin. Processes of oxygen activation during embryogenesis of heterotic maize hybrids and their parental forms. Ukrain. J. Bot. 23: 23-30. 1966.
- Janson, B. F. and N. H. Deema. Sweet corn susceptibility to maize dwarf mosaic. Plant Dis. Repr. 49: 478-479. 1965.
- Janson, B. F., L. E. Williams, W. R. Findley, E. J. Dollinger and C. W. Ellett. Maize dwarf mosaic: new corn virus disease in Ohio. Ext. Bull. Ohio Agric. Exp. Sta. No. 460. pp. 16. 1965.
- Jaynes, T. A. Alpha-amylase in developing corn endosperm. M.S. Thesis in Genetics, The Pennsylvania State University. 1966.
- Jellum, M. D. Oil composition of four kernel tissues of inbreds and reciprocal crosses in corn. Abstr. Amer. Soc. Agron. 1966: 8. 1966. (Abstr.)
- Jellum, M. D. Fatty acid composition of corn oil of parental inbreds and reciprocal crosses. J. Hered. 57: 243-244. 1966.
- Jellum, M. D. Corn performance trials and acreage in Georgia. Ga. Agr. Res. 8: 6-8. 1966.
- Jellum, M. D. and J. E. Marion. Factors affecting oil content and oil composition of corn (Zea mays L.) grain. Crop Sci. 6: 41-42. 1966.
- Jellum, M. D. and R. E. Worthington. A rapid method of fatty acid analysis of oil from individual corn (Zea mays L.) kernels. Crop Sci. 6: 251-253. 1966.
- Johnson, M. W., D. E. Baker and W. I. Thomas. Genetic control of accumulation of fertilizer elements. Sci. Fmr., Pa. 13: 6. 1966.



- Jordan, W. S. and R. G. Creech. A qualitative and quantitative sugar analysis in maize endosperm mutants. Abstr. Amer. Soc. Agron. 1966: 41. 1966. (Abstr.)
- Josephson, L. M., S. E. Bennett, and E. E. Burgess. Methods of artificially infesting corn with the corn earworm and factors influencing resistance. J. Econ. Entom. 59: 1322-1324. 1966.
- Josephson, L. M. and J. W. Hilty. Corn virus disease in Tennessee in 1966 and reaction of corn strains to the disease. Crops Res. Div. Report CR-79-66. 1966.
- Judin, B. F. and M. N. Hvatova. The recognition and utilization of haploidy and polyploidy in maize breeding. Genetika, Moskva 1966: 60-67. 1966. (Russian)
- Judin, B. F. and M. N. Hvatova. Cytogenetic study of twin plants in diploid and tetraploid maize. Genetika Moskva 1965: 131-137. 1965. (Russian)
- Kappelman, A. J. Factors facilitating the selection of corn for resistance to Diplodia zeae. Diss. Abstr. 26: 603. 1965. (Abstr.)
- Kappelman, A. J. and D. L. Thompson. Inheritance of resistance to Diplodia stalk-rot in corn. Crop Sci. 6: 288-290. 1966.
- Kaukis, K. and A. Haunold. Effect of maturity on amylose content in the sweet corn endosperm. Crop Sci. 6: 577-579. 1966.
- Kester, D. E. and R. A. Brink. Variation in paramutability of  $R^f$  in maize following extraction of the allele from a linked reciprocal translocation. Genetics 54: 1401-1407. 1966.
- Kovacik, A., R. Skalska and Z. Ruzickova. A contribution to the study of parthenocarpy and parthenogenesis in maize. Ved. Prace Vyzk. Ustav. Rostlin. Vyroby. Praxe-Ruzyni 8: 93-106. 1965. (Czechoslovakia).
- Levings, C. S. and D. E. Alexander. Double reduction in autotetraploid maize. Genetics 54: 1297-1305. 1966.
- Levings, C. S., J. W. Dudley, and D. E. Alexander. Inbreeding and crossing in autotetraploid maize. Crop Sci. 7: 72-74. 1967.
- Liu, H. Z. Autonomy of  $w-3$  gene action in divergent genetic backgrounds of Zea mays L. Diss. Abstr. 25: 3219-3220. 1964. (Abstr.)
- Loeffel, F. A. Effects of genotype and environment on chlorophyll content of Zea mays L. Abstr. Amer. Soc. Agron. 1966: 11. 1966. (Abstr.)
- Loeffel, F. A.  $S_1$  crosses compared with crosses of homozygous lines. Proc. 19th Ann. Hybrid Corn Ind.-Res. Conf. 19: 95-104. 1964.

- Loeffel, F. A. and E. M. Johnson. Investigations of plant reaction to the maize dwarf mosaic virus. Progr. Rep. Univ. Ky. Agric. Exp. Sta. No. 160. pp. 19. 1965.
- Lonnquist, J. H., O. Cota A. and C. O. Gardner. Effect of mass selection and thermal neutron irradiation on genetic variances in a variety of corn (Zea mays L.). Crop Sci. 6: 330-332. 1966.
- Lorenzoni, C. Knobs and quantitative characters in Italian maize varieties. Ann. Fac. Agr. Univ. Catt. Milano 5: 343-366. 1965.
- Lorenzoni, C. and M. Pozzi. A further system of balanced lethal factors in maize. Maydica, Bergamo 10: 83-90. 1965.
- Madjolelo, S. D. P., C. O. Grogan, and P. A. Sarvella. Morphological expression of genetic male sterility in maize (Zea mays L.). Crop Sci. 6: 379-380. 1966.
- Maguire, M. P. The relationship of crossing over to chromosome synapsis in a short paracentric inversion. Genetics 53: 1071-1077. 1966.
- Maksjutin, G. V. Electrophoretic studies of the dynamics of protein accumulation in maize plants. Agric. Biol. 1: 315-317. 1966. (Russian)
- Massey, H. F. and F. A. Loeffel. Variation in zinc content of grain from inbred lines of corn. Agron. J. 58: 143-144. 1966.
- Mazoti, L. B. Specific mutational tendency of the  $vp$  loci (vivipary) in Z. mays. Revista de la Fac. Agron. La Plata 39: 63-78. 1963.
- McDaniel, R. G. and I. V. Sarkissian. Heterosis: complementation by mitochondria. Science 152: 1640-1642. 1966.
- McWilliam, J. R. and B. Griffing. Temperature-dependent heterosis in maize. Aust. J. Biol. Sci. 18: 569-583. 1965.
- Mertz, E. T. and O. E. Nelson. Editors of the Proceedings of the High Lysine Corn Conference published by The Corn Industries Research Foundation, Washington, D. C. June, 1966. The following papers are included:
- Mertz, E. T. Growth of rats on opaque-2 maize. pp. 12-18.
- Pickett, R. A. Opaque-2 corn in swine nutrition. pp. 19-22.
- Rogler, J. C. A comparison of opaque-2 maize and normal corn for the chick. pp. 23-25.
- Bressani, R. Protein quality of opaque-2 maize in children. pp. 34-39.

- Clark, H. E. Opaque-2 corn as source of protein for adult human subjects. pp. 40-44.
- Altschul, A. M. Opaque-2 and parallel developments. pp. 45-46.
- Milner, M. Opaque-2 and world nutrition. pp. 47-49.
- Wellhausen, E. J. Opaque-2 and Latin America. pp. 50-51.
- Bates, L. S. Amino acid analysis. pp. 61-66.
- Concon, J. M. The proteins of opaque-2 maize. pp. 67-73.
- Jimenez, J. R. Protein fractionation studies of high lysine corn. pp. 74-79.
- Dalby, A. Protein synthesis in maize endosperm. pp. 80-89.
- Wichser, W. R. Comparison of the dry milling properties of opaque-2 and normal dent corn. pp. 104-116.
- Watson, S. A. Comparison of the wet milling properties of opaque-2 and normal dent corn. pp. 117-120.
- Dimler, R. J. Report on kernel structure and wet milling of high lysine corn. pp. 121-127.
- Thomas, A. T. Evaluation of opaque-2 maize for fermentations with *Saccharomyces Cerevisiae*. pp. 128-134.
- Alexander, D. E. Problems associated with breeding opaque-2 corns, and some proposed solutions. pp. 143-147.
- Wellhausen, E. J. The incorporation of opaque-2 into tropical varieties of maize. pp. 148-155.
- Nelson, O. E. Opaque-2, floury-2 and high-protein maize. pp. 156-160.
- Hadley, N. S. Possible economic impacts of high lysine corn on American agriculture. pp. 161-165.
- Mertz, E., O. E. Nelson, L. S. Bates and O. A. Vern. Better protein quality in maize. *Adv. in Chem.* 57: 228-242. 1966.
- Metwally, M. A. M. Estimation of number of genes controlling number of leaves in *Zea mays*. *Agric. Res. Rev. Cairo* 43: 39-45. 1965.
- Mifflin, B. J. and R. H. Hageman. Activity of chloroplasts from maize inbreds and their  $F_1$  hybrids. *Crop Sci.* 6: 185-187. 1966.
- Minakov, N. A. Resistance of some hybrids to the herbicide 2, 4-DA. *Kukuruza* 1965: 42. 1965. (Russian)

- Moens, P. B. The time of chromosome pairing at meiosis. *Genetics* 54: 349. 1966. (Abstr.)
- Mohamed, A. H., M. M. El-Haddad and G. S. Mallah. Inheritance of quantitative characters in *Zea mays*. VI. Genetic studies on the resistance to the European borer. *Canad. J. Genet. Cyt.* 8: 122-129. 1966.
- Mohamed, A. H. and S. E. A. Younis. Inheritance of quantitative characters in *Zea mays*. V. Popping expansion in popcorn. *Canad. J. Genet. Cyt.* 8: 111-114. 1966.
- Molcan, I. M. Physiological changes during storage in pollen of different species in mixtures. *Rep. Timirjasev Agric. Acad.* 1965: 253-260. 1965. (Russian)
- Moll, R. H. and H. F. Robinson. Observed and expected response in selection experiments in maize. *Crop Sci.* 6: 319-324. 1966.
- Moore, R. P. and S. F. Goodsell. Tetrazolium test for predicting cold test performance of seed corn. *Agron. J.* 57: 489-491. 1965.
- Mortimore, C. G. and R. E. Wall. Stalk rot of corn in relation to plant population and grain yield. *Canad. J. Pl. Sci.* 45: 487-492. 1965.
- Murdy, W. H. The inheritance of phenolics in a maize-teosinte cross. *Amer. J. Bot.* 53: 637. 1966. (Abstr.)
- Nanda, D. K. and S. S. Chase. An embryo marker for detecting monoploids of maize (*Zea mays* L.) *Crop Sci.* 6: 213-215. 1966.
- Nelson, O. E. Genes that affect the quality of endosperm proteins in maize. *Proc. 20th Ann. Hybrid Corn Ind.-Res. Conf.* 20: 17-21. 1965.
- Nelson, O. E. Mutant genes that change the composition of maize endosperm proteins. *Fed. Proc.* 25: 1676-1678. 1966.
- Nikoro, Z. S. and A. N. Sidorov. Genetic analysis of fertility restorers in the maize cultivar Risovaja 645. *Genetika Moskva* 1966: 64-73. 1966. (Russian)
- Oelke, E. A. and R. H. Andrew. Chlorophyll relationships for certain sweet corn genotypes in different environments. *Crop Sci.* 6: 113-116. 1966.
- Ortman, E. E. and P. J. Fitzgerald. Developments in corn rootworm research. *Proc. 19th Ann. Hybrid Corn Ind.-Res. Conf.* 19: 38-45. 1964.
- Paolillo, D. J. Jr. and R. H. Falk. The ultrastructure of grana in mesophyll plastids of *Zea mays*. *Amer. J. Bot.* 53: 173-181. 1966.



and B. O. Paratori. Geographic distribution, classification and study of maize (*Z. mays*) in Chile. Agric. Tec. Santiago 86. 1965.

A. Phase variation of regulatory elements in maize. Genetics 49:266. 1966.

Peterson, P. A. Novel variation resulting from the effect of a regulatory-controller system on a locus in maize. Genetics 54: 354. 1966. (Abstr.)

Quast, D. G. Quantitative and qualitative study of the protein in grains of maize (*Z. mays* L.). Bragantia 24: 133-149. 1965.

Rhoades, M. M. and E. Dempsey. The effect of abnormal chromosome 10 on preferential segregation and crossing over in maize. Genetics 53:989-1020. 1966.

Rhoades, M. M. and E. Dempsey. Induction of chromosome doubling at meiosis by the elongate gene in maize. Genetics 54: 505-522. 1966.

Rhodes, B. B. and O. Myers. Dosage effects of the knotted gene on growth and development in maize. J. Hered. 57:91-94. 1966.

Robertson, D. S. Crossing over and chromosomal segregation involving the B<sup>9</sup> element of the A-B translocation B-9b in maize. Genetics 55: 433-449. 1967.

Robertson, D. S. Allelic relationships and phenotypic interactions of four dominant modifiers of the cl<sub>1</sub> locus of maize. Heredity 21: 1-7. 1966.

Robertson, D. S., M. D. Bachmann, and I. C. Anderson. Role of carotenoids in protecting chlorophyll from photodestruction. II. Studies on the effect of four modifiers of the albino cl<sub>1</sub> mutant of maize. Photochem. and Photobiol. 5: 797-805. 1966.

Robertson, D. S., M. D. Bachmann, and I. C. Anderson. Biochemical and plastid alterations in allelic mutants of the w<sub>3</sub> locus in maize. Genetics 54: 357-358. 1966. (Abstr.)

Rodriguez, V. and D. B. Linden. Effects of Co 60 gamma irradiation on corn pollen. J. Agric. Univ. Puerto Rico 50: 10-17. 1966.

Runge, R. R. The effect of intrachromosomal recombination on coincidental crossing over in maize. Genetics 53: 961-969. 1966.

Russell, W. A. and F. Marquez-Sanchez. Effect of cytoplasmic male sterility and restorer genes on performance among different genotypes of corn. Crop Sci. 6: 294-295. 1966.

Sarkar, K. R. and E. H. Coe, Jr. A genetic analysis of the origin of maternal haploids in maize. Genetics 54: 453-464. 1966.

Sarvella, P. and C. O. Grogan. Inverted ear mutant in *Zea mays* L. J. Hered. 57: 211-212. 1966.

Saulescu, N. and T. Popa. The embryo as an indicator of yield in hybrid maize. Z. Pflanzenz. 54: 1-5. 1965.

Saxena, K. M. S. The complex nature of Rp<sub>1</sub>, a gene for resistance to rust, Puccinia sorghi, in corn. Diss. Abstr. 25: 6873. 1965. (Abstr.)

Scandalios, J. G. Genetic variation of alcohol dehydrogenase in maize. Genetics 54: 359-360. 1966. (Abstr.)

Schmidt, J. L. and A. R. Hallauer. Estimating harvest date of corn in the field. Crop Sci. 6: 227-231. 1966.

Schrader, L. E., D. M. Peterson, E. R. Leng and R. H. Hageman. Nitrate reductase activity of maize hybrids and their parental inbred. Crop Sci. 6: 169-173. 1966.

Schwartz, D. The genetic control of alcohol dehydrogenase in maize: Gene duplication and repression. P.N.A.S. 56: 1431-1437. 1966.

Schwartz, D. and T. Endo. Alcohol dehydrogenase polymorphism in maize--simple and compound loci. Genetics 53: 709-715. 1966.

Scossiroli, R. E. The use of induced mutations in plant breeding. Rep. Meeting FAO and IAEA Rome 1964. pp. 443-450. 1965.

Scott, G. E. and W. D. Guthrie. Survival of European corn borer larvae on resistant corn treated with nutritional substances. J. Econ. Ent. 59: 1265-1267. 1966.

Scott, G. E., F. F. Dicke, and G. R. Pesho. Location of genes conditioning resistance in corn to leaf feeding of the European corn borer. Crop Sci. 6: 444-446. 1966.

Scott, G. E., W. D. Guthrie, and C. L. Tipton. Possible causes of resistance to the European corn borer. Crop Sci. 6: 395-396. 1966.

Sehgal, S. M. and W. L. Brown. Introgression in corn belt maize. Econ. Bot. 19: 83-88. 1965.

Semenenko, G. I. Comparative analysis of nucleic acid metabolism in the germinating shoots of self-pollinated maize lines and their hybrids. Sci. Not. Har'kov Univ. Trans. Sci.-Res. Inst. Biol. 137: 24-32. 1963. (Russian)

Sen, D., P. S. Chourey, and N. K. Notani. Mitomycin-induced inhibition of DNA synthesis and its significance for the basis of cytoplasmic male sterility in maize. Proc. 54th Ind. Sci. Congr. Part III. Abstr. No. 219, p. 369. 1967.

- Shumway, L. K. and L. F. Bauman. Nonchromosomal stripe of maize. *Genetics* 55: 33-38. 1967.
- Shumway, L. K. and L. F. Bauman. Effect of hot water treatment, X-ray irradiation, and mesocotyle grafting on cytoplasmic male sterility of maize. *Crop Sci.* 6: 341-342. 1966.
- Sidorov, F. F. and D. S. Pereverzev. Cold-resistant lines from the world collection. *Kukuruza* 1965: 29-31. 1965. (Russian)
- Singh, M. Cytoplasmic effects on some agronomic characters in backcross maize hybrids. *Indian J. Genet.* 25: 198-207. 1965.
- Sinha, S. K. and A. P. Rao. Certain aspects of chromosomal competition for chiasmata in maize. *Proc. Indian Sci. Congr.* 54: 393. 1967. (Abstr.)
- Sinha, S. K. and A. P. Rao. Variability in pollen grains in maize and its genetic significance. *Proc. Ind. Sci. Congr.* 1967. (Abstr.)
- Sinkovics, M. The role of vitamins of the B group in the heterosis phenomenon. *Novenytermeles* 14: 173-180. 1965. (Russian)
- Skvarla, J. J. and D. A. Larson. Fine structural studies of *Zea mays* pollen I: Cell membranes and exine ontogeny. *Amer. J. Bot.* 53: 1112-1125. 1966.
- Smith, H. H. Relative biological effectiveness of different types of ionizing radiations: Cytogenetic effects in maize. *Proc. Symp. "Mechanisms of Mutation and Inducing Factors," Academia, Prague,* pp. 179-182. 1966.
- Smith, H. H. and H. H. Rossi. Energy requirements and RBE for producing a cytogenetic phenomenon in maize by irradiating seeds with X-rays and mono-energetic neutrons. *Radiation Res.* 28: 302-321. 1966.
- Sprague, G. F. and H. H. McKinney. Aberrant ratio: An anomaly in maize associated with virus infection. *Genetics* 54: 1287-1296. 1966.
- Sriwatanapongse, S. and L. F. Bauman. Oil content as a measure of seed quality in corn (*Zea mays* L.). *Crop Sci.* 6: 88. 1966.
- Stuber, C. W. and C. C. Cockerham. Gene effects and variances in hybrid populations. *Genetics* 54: 1279-1286. 1966.
- W., R. H. Moll and W. D. Hanson. Genetic variances and relationships of six traits in a hybrid population of *Zea* *Crop Sci.* 6: 455-458. 1966.

metastable nature of paramutable R alleles in maize. Characteristics of alleles differing in geographic origin. 399-409. 1967.

- Styles, E. D. The metastable nature of paramutable R alleles in maize. III. Heritable changes in level of R action in heterozygotes carrying different paramutable R alleles. *Genetics* 55: 411-422. 1967.
- Styles, E. D. and R. A. Brink. The metastable nature of paramutable R alleles in maize. I. Heritable enhancement in level of standard R action. *Genetics* 54: 433-439. 1966.
- Tabata, M. and F. Motoyoshi. Hereditary control of callus formation in maize endosperm cultured in vitro. *Jap. J. Genet.* 40: 343-355. 1965.
- Tello, F., M. A. Alvarez-Tostado, and G. Alvarado. A study on the improvement of the essential amino acid balance of corn protein. I. Correlation between racial and varietal characteristics and lysine levels of corn. *Cereal Chem.* 42: 368-384. 1965.
- Thomas, W. I., D. E. Baker and M. W. Johnson. Genotypic control of mineral nutrient accumulation in corn. *Abstr. Amer. Soc. Agron.* 1966: 113. 1966. (Abstr.)
- Ting, Y. C. Spontaneous chromosome inversions of Guatemalan teosintes (*Zea mexicana*). *Genetica* 36: 229-242. 1966.
- Ting, Y. C. Studies of a chromosome interchange in maize (*Zea mays* L.) *Genetics* 54: 367. 1966. (Abstr.)
- Ting, Y. C. Studies of a chain-forming interchange in maize (*Zea mays* L.). *Adv. Fr. Pl. Sci. (India).* 386-400. 1966.
- Torregroza, M. The effect of a method of maintaining six open-pollinated varieties of corn on the genetic stability of eight agronomic characters. *Diss. Abstr.* 26: 2428-2429. 1965. (Abstr.)
- Troyer, A. F. The inheritance of long first internode in corn. *Diss. Abstr.* 25: 4342. 1965. (Abstr.)
- Tsai, C. Y. and O. E. Nelson. Starch-deficient maize mutant lacking adenosine diphosphate glucose pyrophosphorylase activity. *Science* 151: 341-343. 1966.
- Turbin, N. V., A. N. Palilova and A. V. Smol'skaja. The effect of some amino acids on the germinating ability of the pollen of corn hybrids with different cytoplasm. *Agric. Biol.* 3: 361-365. 1966. (Russian)
- Ullstrup, A. J. Maize dwarf mosaic. *Proc. 20th Ann. Hybrid Corn Ind.-Res. Conf.* 20: 118-123. 1965.
- Urano, K., S. Sakaguchi and T. Machida. Phytoimmunological studies in *Zea mays*. (1) On varieties-specific antigen. *Jap. J. Breeding* 15: 158-162. 1965.



- Vaidya, S. M. A new type found in corn. *Curr. Sci.* 34: 261-262. 1965.
- Wall, R. E. and C. G. Mortimore. Red striped pericarp of corn. *Canad. Pl. Dis. Surv.* 45: 92-93. 1965.
- Wall, R. E. and C. G. Mortimore. The growth pattern of corn in relation to resistance to root and stalk rot. *Canad. J. Bot.* 43: 1277-1283. 1965.
- Wellhausen, E. J. Exotic germ plasm for improvement of Corn Belt maize. *Proc. 20th Ann. Hybrid Corn Ind.-Res. Conf.* 20: 31-50. 1965.
- Williams, A. F. and S. N. Postlethwait. Studies of development in maize mutant, Polytypic (Pt). *Amer. J. Bot.* 53: 615. 1966. (Abstr.)
- Williams, B. A. An ultrastructural study of genetic modification in *Zea mays* L. endosperm cells. M.S. Thesis in Genetics, The Pennsylvania State University. 1966.
- Williams, L. E., W. R. Findley, E. J. Dollinger, B. D. Blair and O. W. Spilker. Corn virus research in Ohio in 1965. *Res. Circ. Ohio Agric. Res. Dev. Cent. No. 145.* pp. 22. 1966.
- Zirzow, B., R. Borner, and H. Goring. The RNA content of the unsoaked embryos of two inbred lines of *Z. mays* L. and their interline hybrid. *Flora, Jena* 156: 127-138. 1965.