

## REFERENCES

- Abdel Hak TM, El-Sherif NA, Bassiouny AA, Shafik II and El-Dauadi Y 1980. Control of wheat leaf rust by systemic fungicides. Proceedings of the Fifth European and Mediterranean Cereal Rusts Conference, Bari, Italy, 255-266.
- Acosta AC 1962. The transfer of stem rust resistance from rye to wheat. *Dissertation Abstracts* **23**, 34-35.
- Allan RE and Purdy LH 1970. Reaction of F2 seedlings of several crosses of susceptible and resistant wheat selections to *Puccinia striiformis*. *Phytopathology* **60**, 1368-1372.
- Allan RE, Peterson CJ Jr, Rubenthaler GL, Line RF and Roberts DE 1989. Registration of 'Madsen' wheat. *Crop Science* **29**, 1575-1576.
- Allan RE, Peterson CJ Jr, Rubenthaler GL, Line RF and Roberts DE 1990. Registration of 'Hyak' wheat. *Crop Science* **30**, 234.
- Allard RW and Shands RG 1954. Inheritance of resistance to stem rust and powdery mildew in cytologically stable spring wheats derived from *Triticum timopheevi*. *Phytopathology* **44**, 266-274.
- Anderson MK, Williams ND and Maan SS 1971. Monosomic analyses of genes for resistance derived from Marquis and Reliance wheat. *Crop Science* **11**, 556-558.
- Anderson RG 1961. The inheritance of leaf rust resistance in seven varieties of common wheat. *Canadian Journal of Plant Science* **41**, 342-359.
- Athwal DS and Watson IA 1954. Inheritance and the genetic relationship of resistance possessed by two Kenya wheats to races of *Puccinia graminis tritici*. *Proceedings of the Linnean Society of New South Wales* **79**, 1-14.
- Athwal DS and Watson IA 1957. Inheritance studies with certain leaf rust resistant varieties of *Triticum vulgare* Vill. *Proceedings of the Linnean Society of New South Wales* **82**, 272-284.
- Atkins RE 1967. Inheritance of reaction to race 15B of wheat stem rust in derivatives of Frontana and *Triticum timopheevii* Zhuk. *Iowa State Journal of Science* **41**, 305-311.
- Ausemus ER, Harrington JB, Reitz LP and Worzella WW 1946. A summary of genetic studies in hexaploid and tetraploid wheats. *Journal of the American Society of Agronomy* **38**, 1083-1099.
- Badebo A, Stubbs RW, van Ginkel M and Gebeyehu G 1990. Identification of resistance genes to *Puccinia striiformis* in seedlings of Ethiopian and CIMMYT bread wheat varieties and lines. *Netherlands Journal of Plant Pathology* **96**, 199-210.
- Baker EP and McIntosh RA 1973. Utilization of marked telocentric chromosomes in more efficient genetic analysis. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 635-636. (Agricultural Experiment Station, University of Missouri: Columbia, USA.)
- Baker EP, Sanghi AK, McIntosh RA and Luig NH 1970. Cytogenetical studies in wheat III. Studies of a gene conditioning resistance to stem rust strains with unusual genes for avirulence. *Australian Journal of Biological Sciences* **23**, 369-375.
- Ballantyne B, Murray GM and Brennan JP 1994. Assessing the threat to resistant cultivars from public risk diseases and pests. *Euphytica* **72**, 51-59.
- Bariana HS 1991. Genetic Studies on Stripe Rust Resistance in Wheat. PhD Thesis, University of Sydney.
- Bariana HS and McIntosh RA 1993. Cytogenetic studies in wheat XIV. Location of rust resistance genes in VPM1 and their genetic linkage with other disease resistance genes in chromosome 2A. *Genome* **36**, 476-482.
- Bariana HS and McIntosh RA 1994. Characterisation and origin of rust and powdery mildew resistance genes in VPM1 wheat. *Euphytica* **76**, 53-61.
- Bartos P and Stuchlikova E 1986. Genes for rust resistance. *Annual Wheat Newsletter* **32**, 65-66.
- Bartos P and Valkoun J 1988. Rust resistance genes in Czechoslovak wheats. *Cereal Rusts and Powdery Mildews Bulletin* **16**, 36-40.
- Bartos P, Dyck PL and Samborski DJ 1969a. Adult-plant leaf rust resistance in Thatcher and Marquis wheat, a genetic analysis of the host—parasite interaction. *Canadian Journal of Botany* **47**, 267-269.
- Bartos P, Samborski DJ and Dyck PL 1969b. Leaf rust resistance of some European varieties of wheat. *Canadian Journal of Botany* **47**, 543-546.
- Bartos P, Tersova R and Slovencikova V 1983. Genetics of rust resistance in Czechoslovak wheat cultivars. *Tagungsbericht, Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik* **216**, 555-560.
- Bartos P, Stuchlikova E and Kubova R 1984. Wheat leaf rust epidemics in Czechoslovakia in 1983. *Cereal Rusts Bulletin* **12**, 40-41.
- Bayles RA and Thomas JE 1984. Yellow rust of wheat. United Kingdom Cereal Pathogen Virulence Survey.

- 1983 *Annual Report*, 23-31.
- Bayles RA, Thomas JE, Parry DW and Herron CM 1986. Yellow rust of wheat. United Kingdom Cereal Pathogen Virulence Survey. 1985 *Annual Report*, 13-18.
- Bayles RA, Channell MH and Stigwood PL 1989. Yellow rust of wheat. United Kingdom Cereal Pathogen Virulence Survey. 1988 *Annual Report*, 11-15.
- Bayles RA, Channell MH and Stigwood PL 1990. Yellow rust of wheat. United Kingdom Cereal Pathogen Virulence Survey. 1989 *Annual Report*, 11-17.
- Beaver RG and Powelson RL 1969. A new race of stripe rust pathogenic on the wheat variety Moro, CI.13740. *Plant Disease Reporter* **53**, 91-93.
- Becker D, Brettschneider R and Lörz H 1994. Fertile transgenic wheat from microprojectile bombardment of scutellar tissue. *The Plant Journal* **5**, 299-307.
- Berg LA, Cough FJ and Williams ND 1963. Inheritance of stem rust resistance in two wheat varieties, Marquis and Kota. *Phytopathology* **53**, 904-908.
- Bhardwaj SC, Nayar SK, Prashar M, Kumar J, Menon MK and Singh SB 1990. A pathotype of *Puccinia graminis* f. sp. *tritici* on *Sr24* in India. *Cereal Rusts and Powdery Mildews Bulletin* **18**, 35-38.
- Brennan JP and Murray GM 1988. Australian wheat diseases — assessing their economic importance. *Agricultural Science New Series* **1**, 26-35.
- Brennan PS 1983. Hartog. *Journal of the Australian Institute of Agricultural Science* **49**, 42.
- Brennan PS, Martin DJ, The, TT and McIntosh RA 1983. Torres. *Journal of the Australian Institute of Agricultural Science* **49**, 47.
- Briggle LW and Sears ER 1966. Linkage of resistance to *Erysiphe graminis* f. sp. *tritici* (*Pm3*) and hairy glume (Hg) on chromosome 1A of wheat. *Crop Science* **6**, 559-561.
- Broers LHM 1989. Partial resistance to wheat leaf rust in 18 spring wheat cultivars. *Euphytica* **44**, 247-258.
- Browder LE 1971. Pathogenic specialization in cereal rust fungi, especially *Puccinia recondita* f. sp. *tritici*, concepts, methods of study, and application. Agricultural Research Service Technical Bulletin No. 1432. (United States Department of Agriculture: Washington, DC.)
- Browder LE 1972. Designation of two genes for resistance to *Puccinia recondita* in *Triticum aestivum*. *Crop Science* **12**, 705-706.
- Browder LE 1973a. Specificity of the *Puccinia recondita* f. sp. *tritici*, *Triticum aestivum* 'Bulgaria 88' relationship. *Phytopathology* **63**, 524-528.
- Browder LE 1973b. Probable genotypes of some *Triticum aestivum* 'Agent' derivatives for reaction to *Puccinia recondita* f. sp. *tritici*. *Crop Science* **13**, 203-206.
- Browder LE 1980. A compendium of information about named genes for low reaction to *Puccinia recondita* in wheat. *Crop Science* **20**, 775-779.
- Browder LE and Eversmeyer MG 1986. Interactions of temperature and time with some *Puccinia recondita*, *Triticum* corresponding gene pairs. *Phytopathology* **76**, 1286-1288.
- Browder LE and Young HC Jr 1975. Further development of an infection type coding system for cereal rusts. *Plant Disease Reporter* **59**, 964-965.
- Brown GN 1993. A seedling marker for gene *Sr2* in wheat. Proceedings of the Tenth Australian Plant Breeding Conference Volume 2. (Eds BC Imrie and JB Hacker.) pp. 139-140. (Conference Organising Committee: Gold Coast, Australia.)
- Brown GN, Ellison FW and Mares DJ 1991. *Triticum aestivum* spp. *vulgare* (bread wheat) cv. Sunbri. *Australian Journal of Experimental Agriculture* **31**, 734.
- Bushnell WR and Roelfs AP (Eds) 1984. 'The Cereal Rusts. Vol. I. Origins, Specificity, Structure and Physiology.' (Academic Press: Orlando, FL, USA.)
- Caldwell RM 1968. Breeding of general and/or specific plant disease resistance. In 'Proceedings of the Third International Wheat Genetics Symposium'. (Eds KW Findlay and KW Shepherd.) pp. 263-272. (Australian Academy of Science: Canberra.)
- Caldwell RM, Roberts JJ and Eyal Z 1970. General resistance ('slow rusting') in *Puccinia recondita* f. sp. *tritici* in winter and spring wheats. *Phytopathology* **60**, 1287 (Abstract).
- Campbell AB and Czarnecki EM 1981. Benito hard red spring wheat. *Canadian Journal of Plant Science* **61**, 145-146.
- Carefoot GL and Sprott ER 1967. 'Famine on the Wind, Man's Battle Against Plant Disease.' (Rand McNally and Co.: USA.)
- Cauderon Y, Saigne B and Dauge M 1973. The resistance to wheat rusts of *Agropyron intermedium* and its use in wheat improvement. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 401-407. (Agricultural Experiment Station, University of Missouri: Columbia, USA.)
- Chamberlain NH, Doodson JK and Johnson R 1971. The occurrence of two new physiologic races of *Puccinia striiformis* Westend. in Britain. *Plant Pathology* **20**, 92-95.

- Chen X and Line RF 1992a. Inheritance of stripe rust resistance in wheat cultivars used to differentiate races of *Puccinia striiformis* in North America. *Phytopathology* **82**, 633-637.
- Chen X and Line RF 1992b. Identification of stripe rust resistance genes in wheat genotypes used to differentiate North American races of *Puccinia striiformis*. *Phytopathology* **82**, 1428-1434.
- Chen X and Line RF 1993a. Inheritance of stripe rust resistance in wheat cultivars postulated to have resistance genes at *Yr3* and *Yr4* loci. *Phytopathology* **83**, 382-388.
- Chen X and Line RF 1993b. Inheritance of stripe rust (yellow rust) resistance in the wheat cultivar Carstens V. *Euphytica* **71**, 107-113.
- Chester KS 1946. 'The Nature and Prevention of the Cereal Rusts as Exemplified in the Leaf Rust of Wheat.' (Chronica Botanica Co.: Waltham, Massachusetts, USA.)
- Chilosi G and Johnson R 1990. Resistance to races of *Puccinia striiformis* in seedlings of Italian wheats and possible presence of the *Yr6* gene in some durum cultivars. *Journal of Genetics and Breeding* **44**, 13-20.
- Choudhuri HC 1958. The inheritance of stem and leaf rust resistance in common wheat. *Indian Journal of Genetics* **18**, 90-115.
- Christensen CM 1984. 'EC Stakman, Statesman of Science.' (American Phytopathological Society: St Paul, Minnesota, USA.)
- Cox TS 1991. The contribution of introduced germplasm to the development of US wheat cultivars. In 'Use of Plant Introduction in Cultivar Development, Part 1.' Special Publication 17. pp. 25-47. (Crop Science Society of America: Madison, Wisconsin, USA.)
- Cox TS, Sears RG and Gill BS 1992. Registration of KS90WGRC10 leaf rust-resistant hard red winter wheat germplasm. *Crop Science* **32**, 506.
- Cox TS, Raupp WJ and Gill BS 1994. Leaf rust-resistance genes *Lr41*, *Lr42* and *Lr43* transferred from *Triticum tauschii* to common wheat. *Crop Science* **34**, 339-343.
- Craigie JH 1927. Experiments on sex in rust fungi. *Nature* **120**, 116.
- Cromey MG 1992. A new pathotype of *Puccinia striiformis* in New Zealand with increased pathogenicity to wheat cultivars with the adult plant resistance gene *Yr14*. *Australasian Plant Pathology* **21**, 172-174.
- Cromey MG and Munro CA 1992. Stripe rust resistance in New Zealand wheat cultivars. *Vorräge für Pflanzenzüchtung* **24**, 276-278.
- Czarnecki EM and Lukow OM 1992. Linkage of stem rust resistance gene *Sr33* and the gliadin (*Gli-D1*) locus on chromosome 1DS. *Genome* **35**, 565-568.
- Day PR 1974. 'Genetics of Host-Parasite Interactions.' (WH Freeman: San Francisco, USA.)
- Day PR (Ed.) 1977. 'The Genetic Basis of Epidemics in Agriculture.' Annals of the New York Academy of Sciences Volume 287. (The New York Academy of Sciences: New York, USA.)
- Dhaliwal AS, Mares DJ, Marshall DR and Skerritt JH 1988. Protein composition and pentosan content in relation to dough stickiness of 1B/1R translocation wheats. *Cereal Chemistry* **65**, 143-149.
- Doussinault G, Dosba F and Tanguy AM 1981. Analyse monosomique de la resistance a la rouille jaune du geniteur blé tendre VPM1. Académie D'Agriculture de France. *Extrait du procès-verbal de la Seance du 14 Janvier* 1981, 133-138.
- Doussinault G, Dosba F and Jahier J 1988. Use of a hybrid between *Triticum aestivum* L. and *Aegilops ventricosa* Tausch in wheat breeding. In 'Proceedings of the Seventh International Wheat Genetics Symposium'. (Eds TE Miller and RMD Koebner.) pp. 253-258. (Institute of Plant Science Research: Cambridge, UK.)
- Drijepondt SC, Pretorius ZA and Rijkenberg FHJ 1991. Expression of two wheat leaf rust resistance gene combinations involving *Lr34*. *Plant Disease* **75**, 526-528.
- Driscoll CJ and Anderson LM 1967. Cytogenetic studies of Transec — a wheat-rye translocation line. *Canadian Journal of Genetics and Cytology* **9**, 375-380.
- Driscoll CJ and Bieligi LM 1968. Mapping of the Transec wheat-rye translocation. *Canadian Journal of Genetics and Cytology* **10**, 421-425.
- Driscoll CJ and Jensen NF 1964. Characteristics of leaf rust resistance transferred from rye to wheat. *Crop Science* **4**, 372-374.
- Driscoll CJ and Jensen NF 1965. Release of a wheat-rye translocation stock involving leaf rust and powdery mildew resistances. *Crop Science* **5**, 279-280.
- Dubin HJ, Johnson R and Stubbs RW 1989. Postulated genes for resistance to stripe rust in selected CIMMYT and related wheats. *Plant Disease* **73**, 472-475.
- Dvorak J 1977. Transfer of leaf rust resistance from *Aegilops speltoides* to *Triticum aestivum*. *Canadian Journal of Genetics and Cytology* **19**, 133-141.
- Dvorak J and Knott DR 1977. Homoeologous chromatin exchange in a radiation-induced gene transfer. *Canadian Journal of Genetics and Cytology* **19**, 125-131.
- Dvorak J and Knott DR 1980. Chromosome location of two leaf rust resistance genes transferred from *Triticum speltoides* to *T. aestivum*. *Canadian Journal of Genetics and Cytology* **22**, 381-389.

- Dvorak J and Knott DR 1990. Location of a *Triticum speltoides* chromosome segment conferring resistance to leaf rust in *Triticum aestivum*. *Genome* **33**, 892-897.
- Dvorak J, Resta P and Kota RS 1990. Molecular evidence on the origin of wheat chromosome 4A and 4B. *Genome* **33**, 30-39.
- Dyck PL 1977. Genetics of leaf rust reaction in three introductions of common wheat. *Canadian Journal of Genetics and Cytology* **19**, 711-716.
- Dyck PL 1979. Identification of the gene for adult plant leaf rust resistance in Thatcher. *Canadian Journal of Plant Science* **59**, 499-501.
- Dyck PL 1987. The association of a gene for leaf rust resistance with the chromosome 7D suppressor of stem rust resistance in common wheat. *Genome* **29**, 467-469.
- Dyck PL 1991. Genetics of adult plant leaf rust resistance in 'Chinese Spring' and 'Sturdy' wheats. *Crop Science* **31**, 309-311.
- Dyck PL 1992. Transfer of a gene for stem rust resistance from *Triticum araraticum* to hexaploid wheat. *Genome* **35**, 788-792.
- Dyck PL and Green GJ 1970. Genetics of stem rust resistance in wheat cultivar Red Bobs. *Canadian Journal of Plant Science* **50**, 229-232.
- Dyck PL and Jedel PE 1989. Genetics of resistance to leaf rust in two accessions of common wheat. *Canadian Journal of Plant Science* **69**, 531-534.
- Dyck PL and Johnson R 1983. Temperature sensitivity of genes for resistance in wheat to *Puccinia recondita*. *Canadian journal of Plant Pathology* **5**, 229-234.
- Dyck PL and Kerber ER 1970. Inheritance in hexaploid wheat of adult-plant leaf rust resistance derived from *Aegilops squarrosa*. *Canadian journal of Genetics and Cytology* **12**, 175-180.
- Dyck PL and Kerber ER 1971. Chromosome location of three genes for leaf rust resistance in common wheat. *Canadian journal of Genetics and Cytology* **13**, 480-483.
- Dyck PL and Kerber ER 1977a. Inheritance of leaf rust resistance in wheat cultivars Rafaela and EAP 26127 and chromosome location of gene *Lr17*. *Canadian journal of Genetics and Cytology* **19**, 355-358.
- Dyck PL and Kerber ER 1977b. Chromosome location of gene *Sr29* for reaction to stem rust. *Canadian journal of Genetics and Cytology* **19**, 371-373.
- Dyck PL and Kerber ER 1981. Aneuploid analysis of a gene for leaf rust resistance derived from the common wheat cultivar Terenzio. *Canadian Journal of Genetics and Cytology* **23**, 405-409.
- Dyck PL and Samborski DJ 1968a. Host-parasite interactions involving two genes for leaf rust resistance in wheat. In 'Proceedings of the Third International Wheat Genetics Symposium'. (Eds KW Findlay and KW Shepherd.) pp. 245-250. (Australian Academy of Science: Canberra, Australia.)
- Dyck PL and Samborski DJ 1968b. Genetics of resistance to leaf rust in the common wheat varieties Webster, Loros, Brevit, Carina, Malakof and Centenario. *Canadian journal of Genetics and Cytology* **10**, 7-17.
- Dyck PL and Samborski DJ 1970. The genetics of two alleles for leaf rust resistance at the *Lr14* locus in wheat. *Canadian journal of Genetics and Cytology* **12**, 689-694.
- Dyck PL and Samborski DJ 1974. Inheritance of virulence in *Puccinia recondita* of alleles at the *Lr2* locus for resistance in wheat. *Canadian Journal of Genetics and Cytology* **16**, 323-332.
- Dyck PL and Samborski DJ 1982. The inheritance of resistance to *Puccinia recondita* in a group of common wheat cultivars. *Canadian journal of Genetics and Cytology* **24**, 273-283.
- Dyck PL, Samborski DJ and Anderson RG 1966. Inheritance of adult plant leaf rust resistance derived from the common wheat varieties Exchange and Frontana. *Canadian Journal of Genetics and Cytology* **8**, 665-671.
- Dyck PL, Samborski DJ and Martens JW 1985. Inheritance of resistance to leaf rust and stem rust in the wheat cultivar Glenlea. *Canadian Journal of Plant Pathology* **7**, 351-354.
- Dyck PL, Kerber ER and Lukow OM 1987. Chromosome location and linkage of a new gene (*Lr33*) for reaction to *Puccinia recondita* in common wheat. *Genome* **29**, 463-466.
- Eizenga GC 1987. Locating the *Agropyron* segment in wheat — *Agropyron* transfer no. 12. *Genome* **29**, 365-366.
- El-Bedewy R and Röbbelen G 1982. Chromosomal location and change of dominance of a gene for resistance against yellow rust, *Puccinia striiformis* West., in wheat, *Triticum aestivum* L. *Zeitschrift für Pflanzenzüchtung* **89**, 145-157.
- Endo TR 1988. Induction of chromosomal structural changes by a chromosome of *Aegilops cylindrica* L. in common wheat. *Journal of Heredity* **79**, 366-370.
- Fang CT 1944. Physiologic specialization of *Puccinia glumarum* Erikss. and Henn. in China. *Phytopathology* **34**, 1020-1024.
- Fitzgerald PM, Caldwell RM and Nelson OE 1957. Inheritance of resistance to certain races of leaf rust in wheat. *Agronomy journal* **49**, 539-543.
- Fletcher RJ 1983. Takari. *Journal of the Australian Institute of Agricultural Science* **49**, 46.
- Flor HH 1942. Inheritance of pathogenicity in *Melampsora lini*. *Phytopathology* **32**, 653-659.

- Flor HH 1956. The complementary gene systems in flax and flax rust. *Advances in Genetics* **8**, 29-54.
- Forsyth FR 1956. Interaction of temperature and light on the seedling reaction of McMURACHY wheat to race 15B of stem rust. *Canadian Journal of Botany* **34**, 745-749.
- Friebe B, Heun M and Bushuk W 1989. Cytological characterization, powdery mildew resistance and storage protein composition of tetraploid and hexaploid 1BL/1RS wheat-rye translocation lines. *Theoretical and Applied Genetics* **78**, 425-432.
- Friebe B, Zeller FJ, Mukai Y, Forster BP, Bartos P and McIntosh RA 1992. Characterization of rust resistant wheat-*Agropyron intermedium* derivatives by C-banding, *in situ* hybridization and isozyme analysis. *Theoretical and Applied Genetics* **83**, 775-782.
- Friebe B, Jiang J, Gill BS and Dyck PL 1993. Radiation-induced nonhomoeologous wheat-*Agropyron intermedium* chromosomal translocations conferring resistance to leaf rust. *Theoretical and Applied Genetics* **86**, 141-149.
- Gassner G and Straib W 1932. Die bestimmung der biologischen rassen des weizengelbrostes (*Puccinia glumarum* f. sp. *tritici* (Schmidt.) Erikss. und Henn.). *Arbeiten der Biologischen Reichsanstalt für Land und Forstwirtschaft, Berlin*, **20**, 141-163.
- Gerechter-Amitai ZK and Stubbs RW 1970. A valuable source of yellow rust resistance in Israeli populations of wild emmer, *Triticum dicoccoides* Koern. *Euphytica* **19**, 12-21.
- Gerechter-Amitai ZK, Wahl I, Vardi A and Zohary D 1971. Transfer of stem rust seedling resistance from wild diploid einkorn to tetraploid *durum* wheat by means of a triploid hybrid bridge. *Euphytica* **20**, 281-285.
- Gerechter-Amitai ZK, van Silfhout CH, Grama A and Kleitman F 1989a. *Yr15* — a new gene for resistance to *Puccinia striiformis* in *Triticum dicoccoides* sel. G-25. *Euphytica* **43**, 187-190.
- Gerechter-Amitai ZK, Grama A, van Silfhout CH, and Kleitman, F 1989b. Resistance to yellow rust in *Triticum dicoccoides*. II. Crosses with resistant *Triticum dicoccoides* sel. G25. *Netherlands Journal of Plant Pathology* **95**, 79-83.
- German SE and Kolmer JA 1992. Effect of *Lr34* in the enhancement of resistance to leaf rust of wheat. *Theoretical and Applied Genetics* **84**, 97-105.
- Gill BS, Friebe B and Endo TR 1991. Standard karyotype and nomenclature system for description of chromosome bands and structural observations in wheat (*Triticum aestivum*). *Genome* **34**, 830-839.
- Gough FJ and Merkle OG 1971. Inheritance of stem and leaf rust resistance in Agent and Argus cultivars of *Triticum aestivum*. *Phytopathology* **61**, 1501-1505.
- Gousseau HDM, Deverall BJ and McIntosh RA 1985. Temperature-sensitivity of the expression of resistance to *Puccinia graminis* conferred by the *Sr15*, *Sr8b* and *Sr14* genes in wheat. *Physiological Plant Pathology* **27**, 335-343.
- Grana A and Gerechter-Amitai ZK 1974. Inheritance of resistance to stripe rust (*Puccinia striiformis*) in crosses between wild emmer (*Triticum dicoccoides*) and cultivated tetraploid and hexaploid wheats II. *Triticum aestivum*. *Euphytica* **23**, 393-398.
- Green GJ 1971. Physiologic races of wheat stem rust in Canada from 1919 to 1969. *Canadian Journal of Botany* **49**, 1575-1588.
- Green GJ and Campbell AB 1979. Wheat cultivars resistant to *Puccinia graminis tritici* in western Canada, their development, performance and economic value. *Canadian journal of Plant Pathology* **1**, 3-11.
- Green GJ and Dyck PL 1979. A gene for resistance to *Puccinia graminis* f. sp. *tritici* that is present in wheat cultivar H-44 but not in cultivar Hope. *Phytopathology* **69**, 672-675.
- Green GJ and Knott DR 1962. Adult plant reaction to stem rust of lines of Marquis wheat with substituted genes for resistance. *Canadian journal of Plant Science* **42**, 163-168.
- Green GJ, Knott DR, Watson IA and Pugsley AT 1960. Seedling reactions to stem rust of lines of Marquis wheat with substituted genes for rust resistance. *Canadian journal of Plant Science* **40**, 524-538.
- Grieffey CA and Allan RE 1988. Inheritance of stripe rust resistance among near-isogenic lines of spring wheat. *Crop Science* **28**, 48-54.
- Gupta RB and Shepherd KW 1992. Identification of rye chromosome 1R translocations and substitutions in hexaploid wheats using storage proteins as genetic markers. *Plant Breeding* **109**, 130-140.
- Gyarfas J 1978. Transference of Disease Resistance from *Triticum timopheevii* to *Triticum aestivum*. MSc Thesis, University of Sydney.
- Gyarfas J 1983. Suneca. *journal of the Australian Institute of Agricultural Science* **49**, 43-44.
- Haggag MEA and Dyck PL 1973. The inheritance of leaf rust resistance in four common wheat varieties possessing genes at or near the *Lr3* locus. *Canadian journal of Genetics and Cytology* **15**, 127-134.
- Haggag MEA, Samborski DJ and Dyck PL 1973. Genetics of pathogenicity in three races of leaf rust on four wheat varieties. *Canadian journal of Genetics and Cytology* **15**, 73-82.
- Harder DE and Dunsmore KM 1990. Incidence and virulence of *Puccinia graminis* f.sp. *tritici* on wheat and barley in Canada in 1989. *Canadian Journal of Plant Pathology* **12**, 424-427.

- Harder DE, Mathenge GR and Mwaura LK 1972. Physiologic specialization and epidemiology of wheat stem rust in east Africa. *Phytopathology* **62**, 166-171.
- Hare RA and McIntosh RA 1979. Genetic and cytogenetic studies of durable adult-plant resistances in 'Hope' and related cultivars to wheat rusts. *Zeitschrift für Pflanzenzüchtung* **83**, 350-367.
- Hart GE, McMillin DE and Sears ER 1976. Determination of the chromosomal location of a glutamate oxaloacetate transaminase structural gene using *Triticum-Agropyron* translocations. *Genetics* **83**, 49-61.
- Hart, Helen 1931. Morphologic and Physiologic Studies on Stem Rust Resistance in Cereals. Technical Bulletin 266. (United States Department of Agriculture: Washington, DC.)
- Hawthorn WM 1984. Genetic Analyses of Leaf Rust Resistance in Wheat. PhD Thesis, University of Sydney.
- Hayes HK, Parker JH and Kurtzweil 1920. Genetics of rust resistance in crosses of varieties of *Triticum vulgare* with varieties of *T. durum* and *T. dicoccum*. *Journal of Agricultural Research* **19**, 523-542.
- Heerman RM, Smith GW, Briggles LW and Schwinghamer EA 1956. Inheritance of reaction to stem rust in certain durum and emmer wheats. *Proceedings of the Third International Rust Conference, Mexico City*, 82-83.
- Heun M and Fischbeck G 1987a. Identification of wheat powdery mildew resistance genes by analysing host-pathogen interactions. *Plant Breeding* **98**, 124-129.
- Heun M and Fischbeck G 1987b. Genes for powdery mildew resistance in cultivars of spring wheat. *Plant Breeding* **99**, 282-288.
- Heyne EG and Johnston CO 1954. Inheritance of leaf rust reaction and other characters in crosses among Timstein, Pawnee and Redchief wheats. *Agronomy Journal* **46**, 81-85.
- Heyne EG and Livers RW 1953. Monosomic analysis of leaf rust reaction, awnedness, winter injury and seed colour in Pawnee wheat. *Agronomy Journal* **45**, 54-58.
- Holmes RJ and Dennis JI 1985. Accessory hosts of wheat stripe rust in Victoria, Australia. *Transactions of the British Mycological Society* **85**, 159-160.
- Hovmöller MS 1989. Race specific powdery mildew resistance in 31 Northwest European wheat cultivars. *Plant Breeding* **103**, 228-234.
- Howes NK 1986. Linkage between the *Lr10* gene conditioning resistance to leaf rust, two endosperm proteins and hairy glumes in hexaploid wheat. *Canadian Journal of Genetics and Cytology* **28**, 595-600.
- Hsam SLK and Zeller FJ 1982. Relationships of *Agropyron intermedium* chromosomes determined by chromosome pairing and alcohol dehydrogenase isozymes in common wheat background. *Theoretical and Applied Genetics* **63**, 213-217.
- Hu CC and Roelfs AP 1985. The wheat rusts in the People's Republic of China. *Cereal Rusts Bulletin* **13**, 11-28.
- Hu CC and Roelfs AP 1986. Postulation of genes for stem rust resistance in 13 Chinese wheat cultivars. *Cereal Rusts Bulletin* **14**, 68-74.
- Hu CC and Roelfs AP 1989. Races and virulence of *Puccinia recondita* f. sp. *tritici* in China in 1986. *Plant Disease* **73**, 499-501.
- Huerta-Espino J 1992. Analysis of Wheat Leaf and Stem Rust Virulence on a Worldwide Basis. PhD Thesis, University of Minnesota, USA.
- Huerta-Espino J and Singh RP 1994. First report of virulence for wheat leaf rust gene *Lr19* in Mexico. *Plant Disease* **78**, 640.
- Hussain M, Hassan SF and Kirmani MAS 1980. Virulences in *Puccinia recondita* Rob. ex Desm. f. sp. *tritici* in Pakistan during 1978 and 1979. Proceedings of the Fifth European and Mediterranean Cereal Rusts Conference, Bari, Italy, 179-184.
- Javornik B, Sinkovic T, Vapa L, Koebner RMD and Rogers WJ 1991. A comparison of methods for identifying and surveying the presence of 1BL.1RS translocations in bread wheat. *Euphytica* **54**, 45-53.
- Johnson R 1981. Durable resistance, definition of, genetic control, and attainment in plant breeding. *Phytopathology* **71**, 567-568.
- Johnson R 1986. Genetics of the interaction between plants and their parasites. In 'Natural Antimicrobial Systems. Part 1. Antimicrobial Systems in Plants and Animals'. (Eds GW Gould, ME Rhodes-Roberts, AK Charnley, RM Copper and RG Board.) pp. 131-145. (Bath University Press: Bath, UK.)
- Johnson R 1988. Durable resistance to yellow (stripe) rust in wheat and its implications in plant breeding. In 'Breeding Strategies for Resistance to the Rusts of Wheat'. (Eds NW Simmonds and S Rajaram.) pp. 63-75. (CIMMYT: Mexico.)
- Johnson R 1992. Reflections of a plant pathologist on breeding for disease resistance, with emphasis on yellow rust and eyespot of wheat. British Society for Plant Pathology Presidential Address 1991. *Plant Pathology* **41**, 239-254.
- Johnson R and Bowyer DE 1974. A rapid method of measuring production of yellow rust spores on single seedlings to assess differential interactions of wheat cultivars with *Puccinia striiformis*. *Annals of Applied Biology* **77**, 251-258.
- Johnson R and Dyck PL 1984. Resistance to yellow rust in *Triticum spelta* var. *album* and bread wheat cultivars

- Thatcher and Lee. Proceedings of the Sixth European and Mediterranean Cereal Rusts Conference. (Ed. P Auriou.) pp. 71-74. (Grignon: France.)
- Johnson R and Minchin PN 1992. Genetics of resistance to yellow (stripe) rust of wheat in some differential cultivars. *Vorträge für Pflanzenzüchtung* **24**, 227-229.
- Johnson R and Taylor AJ 1972. Isolates of *Puccinia striiformis* collected in England from the wheat varieties Maris Beacon and Joss Cambier. *Nature* **238**, 105-106.
- Johnson R and Taylor AJ 1977. Yellow rust of wheat. Plant Breeding Institute, Cambridge. *Annual Report* 1976, 119-122.
- Johnson R, Wolfe MS and Scott PR 1969. Plant Breeding Institute, Cambridge. *Annual Report* 1968, 113-123.
- Johnson R, Stubbs RW, Fuchs E and Chamberlain NH 1972. Nomenclature for physiologic races of *Puccinia striiformis* infecting wheat. *Transactions of the British Mycological Society* **58**, 475-480.
- Johnson R, Taylor AJ and Smith GMB 1975. Samples of *Puccinia striiformis* from yellow rust infections on Maris Huntsman in 1974. *Cereal Rusts Bulletin* **3**, 4-6.
- Johnson R, Priestley RH and Taylor EC 1978. Occurrence of virulence in *Puccinia striiformis* for Compair wheat in England. *Cereal Rusts Bulletin* **6**, 11-13.
- Johnson R, Taylor AJ and Smith GMB 1984. Plant Breeding Institute, Cambridge. *Annual Report* 1983, 82-85.
- Johnson R, Calonnet A, Bimb HP and Singh H. In Press. Identification and distribution of genes for resistance to *Puccinia striiformis* in differential and related cultivars. In 'Proceedings of the Eighth Wheat Genetics Symposium'. (Beijing, China).
- Johnston CO and Browder LE 1966. Seventh revision of the international register of physiologic races of *Puccinia recondita* f. sp. *tritici*. *Plant Disease Reporter* **50**, 756-760.
- Johnston CO and Heyne EG 1964. Wichita wheat back-cross lines for differential hosts in identifying physiologic races of *Puccinia recondita*. *Phytopathology* **54**, 385-388.
- Johnston CO and Levine MN 1955. Fifth revision of the international register of physiologic races of *Puccinia rubigo-vera* (DC) Wint. f. sp. *tritici* (Eriks) Carleton=(*P. triticina* Eriks). *Plant Disease Reporter Supplement* **233**, 104-120.
- Jones DR and Deverall BJ 1977. The effect of the *Lr20* resistance gene in wheat on the development of leaf rust, *Puccinia recondita*. *Physiological Plant Pathology* **10**, 275-285.
- Jones ERL, Clifford BC and Willoughby DB 1992 Brown rust of wheat. United Kingdom Cereal Pathogen Virulence Survey. 1991 *Annual Report*, 19-23.
- Jones SS, Dvorak J and Qualset CO 1990. Linkage relations of *Gli-D1*, *Rg2* and *Lr21* on the short arm of chromosome 1D in wheat. *Genome* **33**, 937-940.
- Jones SS Dvorak J, Knott DR and Qualset CO 1991. Use of double-ditelosomic and normal chromosome 1D recombinant lines to map *Sr33* on chromosome arm 1DS in wheat. *Genome* **34**, 505-508.
- Jorgensen JH and Jensen CJ 1973. Gene *Pm6* for resistance to powdery mildew in wheat. *Euphytica* **22**, 4-23.
- Joshi LM 1976. Recent contributions towards epidemiology of wheat rusts in India. *Indian Phytopathology* **29**, 1-16.
- Kao KN and Knott DR 1969. The inheritance of pathogenicity in races 111 and 29 of wheat stem rust. *Canadian Journal of Genetics and Cytology* **11**, 266-274.
- Keed BR and White NH 1971. Quantitative effects of leaf and stem rusts on yield and quality of wheat. *Australian Journal of Experimental Agriculture and Animal Husbandry* **11**, 550-555.
- Kema GHJ 1992. Resistance in spelt wheat to yellow rust I. Formal analysis and variation for gliadin patterns. *Euphytica* **63**, 207-217.
- Kema GHJ and Lange W 1992. Resistance in spelt wheat to yellow rust II. Monosomic analysis of the Iranian accession 415. *Euphytica* **63**, 219-224.
- Kenaschuk E0, Anderson RG and Knott DR 1959. The inheritance of stem rust resistance to race 15B of stem rust in ten varieties of durum wheat. *Canadian Journal of Plant Science* **39**, 316-328.
- Kerber ER 1987. Resistance to leaf rust in hexaploid wheat, *Lr32*, a third gene derived from *Triticum tauschii*. *Crop Science* **27**, 204-206.
- Kerber ER 1988. Telocentric mapping in wheat of the gene *Lr32* for resistance to leaf rust. *Crop Science* **28**, 178-179.
- Kerber ER and Dyck PL 1973. Inheritance of stem rust resistance transferred from diploid wheat (*Triticum monococcum*) to tetraploid and hexaploid wheat and chromosome location of the gene involved. *Canadian Journal of Genetics and Cytology* **15**, 397-409.
- Kerber ER and Dyck PL 1979. Resistance to stem rust and leaf rust of wheat in *Aegilops squarrosa* and transfer of a gene for stem rust resistance to hexaploid wheat. In 'Proceedings of the Fifth International Wheat Genetics Symposium'. (Ed. S Ramanujam.) pp. 358-364. (Indian Society of Genetics and Plant Breeding: New Delhi, India.)
- Kerber ER and Dyck PL 1990. Transfer to hexaploid wheat of linked genes for adult-plant leaf rust and seedling stem rust resistance from an amphiploid of *Aegilops speltoides* x *Triticum monococcum*. *Genome* **33**,

530-537.

- Kibirige-Sebunya I and Knott DR 1983. Transfer of stem rust resistance to wheat from an *Agropyron* chromosome having a gametocidal effect. *Canadian Journal of Genetics and Cytology* **25**, 215-221.
- Kirman MAS, Risvi SSA and Stubbs RW 1984. Postulated genotypes for stripe rust resistance in wheat cultivars of Pakistan. In 'Proceedings of the Sixth European and Mediterranean Cereal Rusts Conference'. (Ed. P Auriou.) pp. 81-85. (Grignon, France.)
- Kislev ME 1982. Stem rust of wheat 3300 years old found in Israel. *Science* **216**, 993-994.
- Knott DR 1957a. The inheritance of rust resistance. II. The inheritance of stem rust resistance in six additional varieties of common wheat. *Canadian Journal of Plant Science* **37**, 177-192.
- Knott DR 1957b. The inheritance of rust resistance. III. The inheritance of stem rust resistance in nine Kenya varieties of common wheat. *Canadian Journal of Plant Science* **37**, 366-384.
- Knott DR 1959. The inheritance of rust resistance. IV. Monosomic analysis of rust resistance and some other characters in six varieties of wheat including Gabo and Kenya Farmer. *Canadian Journal of Plant Science* **39**, 215-228.
- Knott DR 1961. The inheritance of rust resistance. VI. The transfer of stem rust resistance from *Agropyron elongatum* to common wheat. *Canadian Journal of Plant Science* **41**, 109-123.
- Knott DR 1962a. Inheritance of rust resistance. VIII. Additional studies on Kenya varieties of wheat. *Crop Science* **2**, 130-132.
- Knott DR 1962b. The inheritance of rust resistance. IX. The inheritance of resistance to races 15B and 56 of stem rust in the wheat variety Khapstein. *Canadian Journal of Plant Science* **42**, 415-419.
- Knott DR 1965. A comparison of the reaction to stem rust of wheat lines backcrossed five and nine times to Marquis that carry the same resistance genes. *Canadian Journal of Plant Science* **45**, 106-107.
- Knott DR 1966. The inheritance of stem rust resistance in wheat. Proceedings of the Second International Wheat Genetics Symposium. (Ed. J MacKey.) Lund, Sweden 1963. *Hereditas Supplement* **2**, 156-166.
- Knott DR 1968. The inheritance of resistance to stem rust races 56 and 15F3-1L (Can.) in the wheat varieties Hope and H-44. *Canadian Journal of Genetics and Cytology* **10**, 311-320.
- Knott DR 1971. Genes for stem rust resistance in wheat varieties Hope and H-44. *Canadian Journal of Genetics and Cytology* **13**, 186-188.
- Knott DR 1977. Studies on general resistance to stem rust in wheat. In 'Induced Mutations against Plant Diseases'. pp. 81-88. (International Atomic Energy Agency: Vienna, Austria.)
- Knott DR 1980. Mutation of a gene for yellow pigment linked to *Lr19* in wheat. *Canadian Journal of Genetics and Cytology* **22**, 651-654.
- Knott DR 1983. The inheritance of resistance to stem rust races 15B-1 and 56 in 'French Peace' wheat. *Canadian Journal of Genetics and Cytology* **25**, 283-285.
- Knott DR 1984. The inheritance of resistance to race 56 of stem rust in 'Marquillo' wheat. *Canadian Journal of Genetics and Cytology* **26**, 174-176.
- Knott DR 1989. 'The Wheat Rusts — Breeding for Resistance.' Monographs on Theoretical and Applied Genetics 12. (Springer Verlag: Berlin.)
- Knott DR 1990. Near-isogenic lines of wheat carrying genes for stem rust resistance. *Crop Science* **30**, 901-905.
- Knott DR and Anderson RG 1956. The inheritance of rust resistance. I. The inheritance of stem rust resistance in ten varieties of common wheat. *Canadian Journal of Agricultural Science* **36**, 174-195.
- Knott DR and McIntosh RA 1978. The inheritance of stem rust resistance in the common wheat cultivar Webster. *Crop Science* **17**, 365-369.
- Knott DR and Shen I 1961. The inheritance of rust resistance. VII. The inheritance of resistance to races 15B and 56 of stem rust in eleven common wheat varieties of diverse origin. *Canadian Journal of Plant Science* **41**, 587-601.
- Koebner RMD and Shepherd KW 1986. Controlled introgression to wheat of genes from rye chromosome arm 1RS by induction of allosynthesis I. Isolation of recombinants. *Theoretical and Applied Genetics* **73**, 197-208.
- Kolmer JA 1991. Physiologic specialization of *Puccinia recondita* f. sp. *tritici* in Canada in 1990. *Canadian Journal of Plant Pathology* **13**, 371-373.
- Kolmer JA 1992a. Virulence heterozygosity and gametic phase disequilibria in two populations of *Puccinia recondita* (wheat leaf rust fungus). *Heredity* **68**, 505-513.
- Kolmer JA 1992b. Enhanced leaf rust resistance in wheat conditioned by resistance gene pairs with *Lrl3*. *Euphytica* **61**, 123-130.
- Kolmer JA 1993. Physiologic specialisation of *Puccinia recondita* f. sp. *tritici* in Canada in 1991. *Canadian Journal of Plant Pathology* **15**, 34-36.
- Kolmer JA, Dyck PL and Roelfs AP 1991. An appraisal of stem and leaf rust resistance in North American hard red spring wheats and the probability of multiple mutations to virulence in populations of cereal rust fungi. *Phytopathology* **81**, 237-239.

- Kumar J, Nayar SK, Bahadur P, Nagarajan S, Bhardwaj SC, Prashar M and Singh SB 1988. Virulence survey of yellow rust of wheat (*Puccinia striiformis* f.sp. *tritici*) and barley (*P. striiformis* f.sp. *hordei*) during 1985-87. *Cereal Rusts and Powdery Mildews Bulletin* **16**, 30-35.
- Kumar J, Nayar SK, Prashar M, Bhardwaj SC and Bhatnagar R 1993. Virulence survey of *Puccinia striiformis* in India during 1990-1992. *Cereal Rusts and Powdery Mildews Bulletin* **21**, 17-24.
- Labrum KE 1980. The location of *Yr2* and *Yr6* genes conferring resistance to yellow rust. Proceedings of the Fifth European and Mediterranean Cereal Rusts Conference, Bari, Italy, 41-45.
- Large EC 1940. 'The Advance of the Fungi.' (Jonathon Cape: London.)
- Larkin PJ, Spindler LH and Banks PM 1990. Cell culture of alien chromosome addition lines to induce somatic recombination and gene introgression. In 'Progress in Plant Cellular and Molecular Biology'. (Eds HJJ Nijkamp, LHW Van Der Plas and J Van Aartrijk.) pp. 163-168. (Kluwer Academic Publishers: Dordrecht.)
- Law CN 1976. Genetic control of yellow rust resistance in *T. spelta album*. Plant Breeding Institute, Cambridge. Annual Report 1975, 108-109.
- Law CN and Johnson R 1967. A genetic study of leaf rust resistance in wheat. *Canadian Journal of Genetics and Cytology* **9**, 805-822.
- Law CN and Wolfe MS 1966. Location of genetic factors for mildew resistance and ear emergence time on chromosome 7B of wheat. *Canadian Journal of Genetics and Cytology* **8**, 462-470.
- Le Roux J 1985. First report of a *Puccinia graminis* f.sp. *tritici* race with virulence for *Sr24* in South Africa. *Plant Disease* **69**, 1007.
- Le Roux J and Rijkenberg FHJ 1987a. Occurrence and pathogenicity of *Puccinia graminis* f.sp. *tritici* in South Africa during the period 1981-1985. *Phytophylactica* **19**, 456-472.
- Le Roux J and Rijkenberg FHJ 1987b. Pathotypes of *Puccinia graminis* f.sp. *tritici* with increased virulence for *Sr24*. *PlantDisease* **71**, 1115-1119.
- Limpert E, Clifford B, Dreiseitl A, Johnson R, Müller K, Roelfs A and Wellings C 1994. Systems of designation of pathotypes of plant pathogens. *Journal of Phytopathology* **140**, 359-362.
- Line RF and Qayoum A 1991. Virulence, aggressiveness, evolution and distribution of races of *Puccinia striiformis* (the cause of stripe rust of wheat) in North America, 1968-1987. Technical Bulletin No. 1788. (United States Department of Agriculture: Washington.)
- Line RF, Chen XM and Qayoum A 1992. Races of *Puccinia striiformis* in North America, identification of resistance genes and durability of resistance. *Vorträge für Pflanzenzüchtung* **24**, 280-282.
- Livers RW 1978. Registration of Sage wheat. *Crop Science* **18**, 917.
- Loegering WQ 1966. The relationship between host and pathogen in stem rust of wheat. Proceedings of the Second International Wheat Genetics Symposium. (Ed. J Mackey.) Lund, Sweden, 1963. *Hereditas Supplement* **2**, 167-177.
- Loegering WQ 1968. A second gene for resistance to *Puccinia graminis* f.sp. *tritici* in the Red Egyptian 2D wheat substitution line. *Phytopathology* **58**, 584-586.
- Loegering WQ 1972. Specificity in plant diseases In 'Biology of Rust Resistance in Forest Trees'. Miscellaneous Publication No. 1221. pp. 29-37. (United States Department of Agriculture: Washington.)
- Loegering WQ 1975. An allele for low reaction to *Puccinia graminis tritici* in Chinese Spring wheat. *Phytopathology* **65**, 925.
- Loegering WQ and Harmon DL 1969. Wheat lines near-isogenic for reaction to *Puccinia graminis tritici*. *Phytopathology* **59**, 456-459.
- Loegering WQ and Powers HR Jr 1962. Inheritance of pathogenicity in a cross of physiological races 111 and 36 of *Puccinia graminis* f.sp. *tritici*. *Phytopathology* **52**, 547-554.
- Loegering WQ and Sears ER 1966. Relationships among stem-rust genes on wheat chromosomes 2B, 4B and 6B. *Crop Science* **6**, 157-160.
- Loegering WQ and Sears ER 1973. The gene for low reaction to *Puccinia graminis tritici* in the Thatcher-3B substitution line. *Crop Science* **13**, 282.
- Long DL and Kolmer JA 1989. A North American system of nomenclature for *Puccinia recondita* f. sp. *tritici*. *Phytopathology* **79**, 525-529.
- Long DL, Roelfs AP and Roberts JJ 1992. Virulence of *Puccinia recondita* f. sp. *tritici* in the United States during 1988-1990. *Plant Disease* **76**, 495-499.
- Long DL, Roelfs AP, Leonard KJ and Roberts JJ 1993. Virulence and diversity of *Puccinia recondita* f. sp. *tritici* in the United States in 1991. *Plant Disease* **77**, 786-791.
- Louwers J and Sharma S 1992. Postulation of resistance genes to yellow rust (*Puccinia striiformis* f. sp. *tritici*) in advanced wheat lines from Nepal. *Vorträge für Pflanzenzüchtung* **24**, 279.
- Luig NH 1960. Differential transmission of gametes in wheat. *Nature* **185**, 636-637.
- Luig NH 1964. Heterogeneity in segregation data from wheat crosses. *Nature* **204**, 260-261.
- Luig NH 1968. Mechanism of differential transmission of gametes in wheat. In 'Proceedings of the Third

- International Wheat Genetics Symposium'. (Eds KW Finlay and KW Shepherd.) pp. 322-323. (Australian Academy of Science: Canberra.)
- Luig NH 1983. A survey of virulence genes in wheat stem rust, *Puccinia graminis* f. sp. *tritici*. Advances in Plant Breeding, Supplement 11 to Journal of Plant Breeding. (Paul Parey: Berlin.)
- Luig NH and McIntosh RA 1968. Location and linkage of genes on wheat chromosome 2D. *Canadian Journal of Genetics and Cytology* **10**, 99-105.
- Luig NH and Rajaram S 1972. The effect of temperature and genetic background on host gene expression and interaction to *Puccinia graminis tritici*. *Phytopathology* **62**, 1171-1174.
- Luig NH and Watson IA 1965. Studies on the genetic nature of resistance to *Puccinia graminis* var. *tritici* in six varieties of common wheat. *Proceedings of the Linnean Society New South Wales* **90**, 299-327.
- Luig NH and Watson IA 1967. Vernstein — a *Triticum aestivum* derivative with Vernal-emmer-type stem rust resistance. *Crop Science* **7**, 31-33.
- Luig NH and Watson IA 1970. The effect of complex genetic resistance in wheat on the variability of *Puccinia graminis* f.sp. *tritici*. *Proceedings of the Linnean Society of New South Wales* **95**, 22-45.
- Luig NH and Watson IA 1972. The role of wild and cultivated grasses in the hybridization of formae speciales of *Puccinia graminis*. *Australian Journal of Biological Sciences* **25**, 335-342.
- Luig NH, McIntosh RA and Watson IA 1973. Genes for resistance to *P. graminis* in the standard wheat stem rust differentials. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 423-424. (Agricultural Experiment Station, University of Missouri: Columbia, USA.)
- Luig NH, Burdon JJ and Hawthorn WM 1985. An exotic strain of *Puccinia recondita tritici* in New Zealand. *Canadian Journal Plant Pathology* **7**, 173-176.
- Lupton FGH and Macer RCF 1962. Inheritance of resistance to yellow rust (*Puccinia glumarum* Erikss. & Henn.) in seven varieties of wheat. *Transactions of the British Mycological Society* **45**, 21-45.
- Lutz J, Limpert E, Bartos P and Zeller FJ 1992. Identification of powdery mildew resistance genes in common wheat (*Triticum aestivum* L.) I. Czechoslovakian cultivars. *Plant Breeding* **108**, 33-39.
- Macer RCF 1966. The formal and monosomic genetic analysis of stripe rust (*Puccinia striiformis*) resistance in wheat. In 'Proceedings of the Second International Wheat Genetics Symposium'. (Ed. J MacKey.) Lund, Sweden 1963. *Hereditas Supplement* **2**, 127-142.
- Macer RCF 1975. Plant pathology in a changing world. *Transactions of the British Mycological Society* **65**, 351-374.
- Macindoe SL and Walkden Brown C 1968. Wheat Breeding and Varieties in Australia. Science Bulletin No. 76. (New South Wales Department of Agriculture: Sydney.)
- Mains EB and Jackson HS 1926. Physiologic specialization in the leaf rust of wheat; *Puccinia triticina* Erikss. *Phytopathology* **16**, 89-120.
- Mains EB, Leighty CE and Johnston CO 1926. Inheritance of resistance to leaf rust *Puccinia triticina* Erikss., in crosses of common wheat, *Triticum vulgare* Vill. *Journal of Agricultural Research* (Washington, DC) **32**, 931-972.
- Marais GF 1990. Preferential transmission in bread wheat of a chromosome segment derived from *Thinopyrum distichum* (Thunb.) Löve. *Plant Breeding* **104**, 152-159.
- Marais GF 1992a. Gamma irradiation induced deletions in an alien chromosome segment of the wheat 'Indis' and their use in gene mapping. *Genome* **35**, 225-229.
- Marais GF 1992b. The modification of a common wheat—*Thinopyrum distichum* translocated chromosome with a locus homoeoallelic to *Lr19*. *Theoretical and Applied Genetics* **85**, 73-78.
- Marais GF, Roux HS, Prerorius ZA and de V Pienaar R 1988. Resistance to leaf rust of wheat derived from *Thinopyrum distichum* (Thunb.) Löve. In 'Proceedings of the Seventh International Wheat Genetics Symposium'. (Eds TE Miller and RMD Koebner.) pp. 369-373. (Institute of Plant Science Research: Cambridge, UK.)
- Marshall D 1992. Virulence of *Puccinia recondita* in Texas from 1988 to 1990. *Plant Disease* **76**, 296-299.
- May C and Wray F 1991. A rapid technique for the detection of wheat-rye translocation chromosomes. *Genome* **34**, 486-488.
- McFadden ES 1930. A successful transfer of emmer characters to *vulgare* wheat. *Journal of the American Society of Agronomy* **22**, 1020-1034.
- McIntosh RA 1972. Cytogenetical studies in wheat VI. Chromosome location and linkage studies involving *Sr13* and *Sr8* for reaction to *Puccinia graminis* f. sp. *tritici*. *Australian Journal of Biological Sciences* **25**, 765-773.
- McIntosh RA 1977. Nature of induced mutations affecting disease reaction in wheat. In 'Induced Mutations Against Plant Disease'. pp. 551-565. (International Atomic Energy Agency: Vienna.)
- McIntosh RA 1978. Cytogenetical studies in wheat X. Monosomic analysis and linkage studies involving genes for resistance to *Puccinia graminis* f. sp. *tritici* in cultivar Kota. *Heredity* **41**, 71-82.

- McIntosh RA 1980. Chromosome location and linkage studies involving the wheat stem rust resistance gene *Sr14*. *Cereal Research Communications* **8**, 315-320.
- McIntosh RA 1981. A gene for stem rust resistance in non-homoeologous chromosomes of hexaploid wheat progenitors. In 'Proceedings of the Thirteenth International Botanical Congress'. Abstract p. 274. (University of Sydney: Sydney.)
- McIntosh RA 1983a. Genetic and cytogenetic studies involving *Lr18* for resistance to *Puccinia recondita*. In 'Proceedings of the Sixth International Wheat Genetics Symposium'. (Ed. S Sakamoto.) pp. 777-783. (Faculty of Agriculture, Kyoto University: Japan.)
- McIntosh RA 1983b. Induced mutations of rust resistance genes in wheat. In 'Induced Mutations for Disease Resistance in Crop Plants II'. pp. 115-118. (International Atomic Energy Agency: Vienna.)
- McIntosh RA 1987. Gene location and gene mapping in hexaploid wheat. In 'Wheat and Wheat Improvement'. (Ed. EG Heyne.) pp. 269-287. (American Society of Agronomy: Madison, Wisconsin, USA.)
- McIntosh RA 1988a. Catalogue of gene symbols for wheat. Proceedings of the Seventh International Wheat Genetics Symposium Vol 2. (Eds TE Miller and RMD Koebner.) pp. 1225-1323. (Institute of Plant Science Research: Cambridge, UK.)
- McIntosh RA 1988b. The role of specific genes in breeding for durable stem rust resistance in wheat and triticale. In 'Breeding Strategies for Resistance to the Rusts of Wheat'. (Eds NW Simmonds and S Rajaram.) pp. 1-9. (CIMMYT: Mexico.)
- McIntosh RA 1992a. Close genetic linkage of genes conferring adult-plant resistance to leaf rust and stripe rust in wheat. *Plant Pathology* **41**, 523-527.
- McIntosh RA 1992b. Pre-emptive breeding to control wheat rusts. In 'Breeding for Resistance'. (Eds R Johnson and GJ Jellis.) pp. 103-113. (Kluwer Academic Publications: Dordrecht.)
- McIntosh RA and Baker EP 1966. Chromosome location of mature plant leaf rust resistance in Chinese Spring wheat. *Australian Journal of Biological Sciences* **19**, 943-944.
- McIntosh RA and Baker EP 1968. A linkage map for chromosome 2D. In 'Proceedings of the Third International Wheat Genetics Symposium'. (Eds KW Finlay and KW Shepherd.) pp. 305-309. (Australian Academy of Science: Canberra.)
- McIntosh RA and Baker EP 1969. Telocentric mapping of a second gene for grass-clump dwarfism. *Wheat Information Service* **29**, 6-7.
- McIntosh RA and Baker EP 1970a. Cytogenetical studies in wheat IV. Chromosome location and linkage studies involving the *Pm2* locus for powdery mildew resistance. *Euphytica* **19**, 71-77.
- McIntosh RA and Baker EP 1970b. Cytogenetical studies in wheat V. Monosomic analysis of Vernstein stem rust resistance. *Canadian Journal of Genetics and Cytology* **12**, 60-65.
- McIntosh RA and Dyck PL 1975. Cytogenetical studies in wheat VII. Gene *Lr23* for reaction to *Puccinia recondita* in Gabo and related cultivars. *Australian Journal of Biological Sciences* **28**, 201-211.
- McIntosh RA and Gyrfas J 1971. *Triticum timopheevi* as a source of resistance to wheat stem rust. *Zeitschrift für Pflanzzüchtung* **66**, 240-248.
- McIntosh RA and Luig NH 1973a. Recombination between genes for reaction to *P. graminis* at or near the *Sr9* locus. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 425—432. (Agricultural Experiment Station, University of Missouri: Columbia, Missouri, USA.)
- McIntosh RA and Luig NH 1973b. Linkage of genes for reaction to *Puccinia graminis* f. sp. *tritici* and *P. recondita* in Selkirk wheat and related cultivars. *Australian Journal of Biological Sciences* **26**, 1145-1152.
- McIntosh RA and Singh SJ 1986. Rusts — Real and potential problems for triticale. In 'Proceedings of the International Triticale Symposium'. (Compiler NL Darvey.) Occasional Publication No. 24. pp. 199-207. (Australian Institute of Agricultural Science: Sydney.)
- McIntosh RA, Baker EP and Driscoll CJ 1965. Cytogenetic studies in wheat. I Monosomic analysis of leaf rust resistance in cultivars Uruguay and Transfer. *Australian Journal of Biological Sciences* **18**, 971-977.
- McIntosh RA, Luig NH and Baker EP 1967. Genetic and cytogenetic studies of stem rust, leaf rust and powdery mildew resistances in Hope and related wheat cultivars. *Australian Journal of Biological Sciences* **20**, 1181-1192.
- McIntosh RA, Dyck PL and Green GJ 1974. Inheritance of reaction to stem rust and leaf rust in the wheat cultivar Etoile de Choisy. *Canadian Journal of Genetics and Cytology* **16**, 571-577.
- McIntosh RA, Dyck PL and Green GJ 1976. Inheritance of leaf rust and stem rust resistances in wheat cultivars Agent and Agatha. *Australian Journal of Agricultural Research* **28**, 37-45.
- McIntosh RA, Partridge M and Hare RA 1980. Telocentric mapping of *Sr12* in wheat chromosome 3B. *Cereal Research Communications* **8**, 321-324.
- McIntosh RA, Luig NH, Johnson R and Hare RA 1981. Cytogenetical studies in wheat XI. *Sr9g* for reaction to *Puccinia graminis tritici*. *Zeitschrift für Pflanzenzüchtung* **87**, 274-289.
- McIntosh RA, Miller TE and Chapman V 1982. Cytogenetical studies in wheat XII. *Lr28* for resistance to

- Puccinia recondita* and Sr34 for resistance to *P. graminis tritici*. *Zeitschrift für Pflanzenzüchtung* **89**, 295-306.
- McIntosh RA, Luig NH, Milne DL and Cusick JE 1983. Vulnerability of triticales to wheat stem rust. *Canadian Journal of Plant Pathology* **5**, 61-69.
- McIntosh RA, Dyck PL, The TT, Cusick JE and Milne DL 1984. Cytogenetical studies in wheat XIII. Sr35 - a third gene from *Triticum monococcum* for resistance to *Puccinia graminis tritici*. *Zeitschrift für Pflanzenzüchtung* **92**, 1-14.
- McIntosh RA, Hart GE and Gale MD 1989. Catalogue of gene symbols for wheat (1989 supplement). *Wheat Information Service* **69**, 49-63.
- McIntosh RA, Hart GE and Gale MD 1990. Catalogue of gene symbols for wheat (1990 supplement). *Wheat Information Service* **70**, 29-50.
- McNeal FH, Konzak CF, Smith EP, Tate WS and Russell TS 1971. 'A Uniform System for Recording and Processing Cereal Research Data.' Agricultural Research Service Bulletin 34-121. (United States Department of Agriculture: Washington.)
- McVey DV 1989. Verification of infection-type data for identification of genes for resistance to leaf rust in some hard red spring wheats. *Crop Science* **29**, 304-307.
- McVey DV 1990. Reaction of 578 spring spelt wheat accessions to 35 races of wheat stem rust. *Crop Science* **30**, 1001-1005.
- McVey DV and Roelfs AP 1975. Postulation of genes for stem rust resistance in the entries of the Fourth International Winter Wheat Performance Nursery. *Crop Science* **15**, 335-337.
- McVey DV and Roelfs AP 1978. Stem rust resistance of the cultivar 'Waldron'. In 'Proceedings of the Fifth International Wheat Genetics Symposium'. (Ed. S. Ramanujam.) pp. 1061-1065. (Indian Society of Genetics and Plant Breeding: New Delhi, India.)
- Mendel G 1865. 'Experiments in Plant Hybridization'. Translated and reprinted in, Peters, JA (Ed.) 1959. 'Classic Papers in Genetics'. (Prentice-Hall: Englewood Cliffs, N.J., USA.)
- Merker A 1982. 'Veery' — a CIMMYT spring wheat with the 1B/1R chromosome translocation. *Cereal Research Communications* **10**, 105-106.
- Mettin D, Blüthner WD and Schlegel G 1973. Additional evidence on spontaneous 1B/1R wheat-rye substitutions and translocations. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 179-184. (Agricultural Experiment Station, University of Missouri: Columbia, Missouri, USA.)
- Metzger RJ and Silbaugh BA 1970. Inheritance of resistance to stripe rust and its association with brown glume colour in *Triticum aestivum* L. 'PI 178383'. *Crop Science* **10**, 567-568.
- Miller TE and Koebner RMD (Eds) 1988. 'Proceedings of the Seventh International Wheat Genetics Symposium.' Vol. II. p. 1211. (Institute of Plant Science Research: Cambridge, UK.)
- Miller TE, Reader SM and Singh D 1988. Spontaneous non-Robertsonian translocations between wheat chromosomes and an alien chromosome. In 'Proceedings of the Seventh International Wheat Genetics Symposium'. (Eds TE Miller and RMD Koebner.) pp. 387-390. (Institute of Plant Science Research: Cambridge, UK.)
- Modawi RS, Browder LE and Heyne EG 1985. Use of infection type data to identify genes for low reaction to *Puccinia recondite* in several winter wheat cultivars. *Crop Science* **25**, 9-13.
- Morrison JR, Larter EN and Green GJ 1977. The genetics of resistance to *Puccinia graminis tritici* in hexaploid triticales. *Canadian Journal of Genetics and Cytology* **19**, 683-693.
- Moseman JG 1970. Genetics of disease and insect resistance. In 'Barley Genetics II, Proceedings of the Second International Barley Genetics Symposium'. (Ed. RA Nilan.) pp. 450-456. (Washington State University Press: Pullman, USA.)
- Mukai J and Gill BS 1991. Detection of barley chromatin added to wheat by genomic *in situ* hybridisation. *Genome* **34**, 448-452.
- Nagarajan S, Nayar SK and Bahadur P 1986a. Race 13 (67 S8) virulent on *Triticum spelta* var. *album* in India. *Plant Disease* **70**, 173.
- Nagarajan S, Nayar SK, Bahadur P and Kumar J 1986b. 'Wheat Pathology and Wheat Improvement.' (Azad Hind Stores: Chandrigarh, India.)
- Nayar SK, Prashar M, Kumar J, Bhardwaj SC and Bhatnagar R 1991. Pathotypes of *Puccinia recondita* f. sp. *tritici* virulent for Lr26 (1BL.1RS translocation) in India. *Cereal Research Communications* **19**, 327-331.
- Nehra NS, Chibbar RN, Leung N, Caswell K, Mallard C, Steinhauer L, Baga M and Kartha KK 1994. Self-fertile transgenic wheat plants regenerated from isolated scutellar tissues following microprojectile bombardment with two distinct gene constructs. *The Plant Journal* **5**, 285-297.
- Nyquist NE 1957. Monosomic analysis of stem rust resistance of a common wheat strain derived from *Triticum timopheevi*. *Agronomy Journal* **49**, 222-223.

- Nyquist NE 1962. Differential fertilization in the inheritance of stem rust resistance in hybrids involving a common wheat strain derived from *Triticum timopheevi*. *Genetics* **47**, 1109-1124.
- O'Brien L, Brown JS, Young RM and Pascoe T 1980. Occurrence and distribution of wheat stripe rust in Victoria and susceptibility of commercial wheat cultivars. *Australasian Plant Pathology* **9**, 14.
- Odintsova IG and Peusha KhO 1982. (Inheritance of resistance to brown rust in bread wheat varieties.) Trudy po Prikladnoi Botanike, Genetikei Seleksii 71, 41—47. Cited in *Plant Breeding Abstracts* **55**, 7658, p. 841.
- Okamoto M 1957. Asynaptic effect of chromosome V. *Wheat Information Service* **5**, 6.
- Park RF and McIntosh RA 1994. Studies of single gene adult plant resistances to *Puccinia recondita* f. sp. *tritici* in wheat. *New Zealand Journal of Crop and Horticultural Science* **22**, 151-158.
- Park RF and Wellings CR 1992. Pathogenic specialisation of wheat rusts in Australia and New Zealand in 1988 and 1989. *Australasian Plant Pathology* **21**, 61-69.
- Park RF, Burdon JJ and McIntosh RA 1993. Origin of an important group of pathotypes of *Puccinia recondita* f. sp. *tritici* in Australasia. In 'Proceedings of the Tenth Australian Plant Breeding Conference'. (Eds BC Imrie and JB Hacker.) pp. 135-136. (Conference Organising Committee, Gold Coast: Australia.)
- Perwaiz MS and Johnson R 1986. Genes for resistance to yellow rust in seedlings of wheat cultivars from Pakistan tested with British isolates of *Puccinia striiformis*. *Plant Breeding* **97**, 289-296.
- Peterson RF, Campbell AB and Hannah AE 1948. A diagrammatic scale for estimating rust intensity of leaves and stems of cereals. *Canadian Journal of Research Section C* **26**, 496-500.
- Plessers AG 1954. The genetics of stem and leaf rust reactions and other characters in Lee wheat with Chinese monosomic testers. *Dissertation Abstracts* **15**, 323.
- Pretorius ZA and Le Roux J 1988. Occurrence and pathogenicity of *Puccinia recondita* f. sp. *tritici* on wheat in South Africa during 1986 and 1987. *Phytophylactica* **20**, 349-352.
- Pretorius ZA, Wilcoxson RD, Long DL and Schaffer, JF 1984. Detecting wheat leaf rust resistance gene *Lr13* in seedlings. *Plant Disease* **68**, 585-586.
- Pretorius ZA, Rijkenberg FHJ and Wilcoxson RD 1987. Occurrence and pathogenicity of *Puccinia recondita* f. sp. *tritici* on wheat in South Africa from 1983 through 1985. *Plant Disease* **71**, 1133-1137.
- Pretorius ZA, Le Roux J and Drijenpondt SC 1990. Occurrence and pathogenicity of *Puccinia recondita* f. sp. *tritici* on wheat in South Africa during 1988. *Phytophylactica* **22**, 225-228.
- Pridham JT 1939. A successful cross between *Triticum vulgare* and *Triticum timopheevi*. *Journal of the Australian Institute of Agricultural Science* **5**, 160-161.
- Priestley RH 1978. Detection of increased virulence in populations of wheat yellow rust. In 'Plant Disease Epidemiology'. (Eds PR Scott and A Bainbridge.) pp. 63-70. (Blackwell Scientific Publications: Oxford.)
- Priestley RH and Bayles RA 1982. Evidence that varietal diversification can reduce the spread of cereal diseases. *Journal of the National Institute of Agricultural Botany* **16**, 31-38.
- Priestley RH and Bayles RA 1988. The contribution and value of resistant cultivars to disease control in cereals. In 'Control of Plant Diseases, Costs and Benefits'. (Eds BC Clifford and E Lester.) pp. 53-65. (Blackwell Scientific Publications: Oxford.)
- Priestley RH, Bayles RA and Thomas JE 1984a. Identification of specific resistances against *Puccinia striiformis* (yellow rust) in winter wheat varieties I. Establishment of a set of type varieties for adult plant tests. *Journal of the National Institute of Agricultural Botany* **16**, 469-476.
- Priestley RH, Bayles RA and Ryall J 1984b. Identification of specific resistances against *Puccinia striiformis* (yellow rust) in winter wheat varieties II. Use of cluster analysis. *Journal of the National Institute of Agricultural Botany* **16**, 477-485.
- Pugsley AT 1956. The gene *SrKal* in relation to the resistance of wheat to *Puccinia graminis tritici*. *The Empire Journal of Experimental Agriculture* **24**, 178-184.
- Pugsley AT and Carter MV 1953. Resistance of twelve varieties of *Triticum vulgare* to *Erysiphe graminis tritici*. *Australian Journal of Biological Sciences* **6**, 335-346.
- Purdy LH and Allan RE 1966. A stripe rust race pathogenic to 'Suwon 92' wheat. *Plant Disease Reporter* **50**, 205-207.
- Purdy LH, Peterson CJ Jr and Allan RE 1966. Illustrating pedigrees of small grain cereals. Agricultural Research Service, Crops Research Bulletin CR-22-66. (United States Department of Agriculture: Washington DC.)
- Quinones MA, Larter EN and Samborski DJ 1972. The inheritance of resistance to *Puccinia recondita* in hexaploid triticales. *Canadian Journal of Genetics and Cytology* **14**, 495-505.
- Rajaram S, Luig NH and Watson IA 1971a. The inheritance of leaf rust resistance in four varieties of common wheat. *Euphytica* **20**, 574-585.
- Rajaram S, Luig NH and Watson IA 1971b. Genetic analysis of stem rust resistance in three cultivars of wheat. *Euphytica* **20**, 441-452.

- Rajaram S, Singh RP and Torres E 1988. Current CIMMYT approaches in breeding wheat for rust resistance. In 'Breeding Strategies for Resistance to the Rusts of Wheat'. (Eds NW Simmonds and S Rajaram.) pp. 101-117. (CIMMYT: Mexico.)
- Rees RG and Platz GJ 1975. Control of wheat leaf rust with 4-n-butyl-1,2,4-triazole. *Australian Journal of Experimental Agriculture and Animal Husbandry* **15**, 276-280.
- Riley R and Chapman V 1958. Genetic control of the cytologically diploid behaviour of hexaploid wheat. *Nature* (London) **182**, 713-715.
- Riley R, Chapman V and Johnson R 1968. The incorporation of alien disease resistance in wheat by genetic interference with the regulation of meiotic chromosome synapsis. *Genetical Research, Cambridge* **12**, 199-219.
- Roelfs AP 1978. Estimated losses caused by rust in small grain cereals in the United States — 1918-76. Miscellaneous Publication 1363. (United States Department of Agriculture: Washington DC.)
- Roelfs AP 1982. Effects of barberry eradication on stem rust in the United States. *Plant Disease* **66**, 177-181.
- Roelfs AP 1984. Race specificity and methods of study. In 'The Cereal Rusts'. Vol. I. (Eds WR Bushnell and AP Roelfs.) pp. 131-164. (Academic Press: Orlando, Florida, USA.)
- Roelfs AP 1985. Wheat and rye stem rust. In 'The Cereal Rusts'. Vol. II. (Eds AP Roelfs and WR Bushnell.) pp. 3-37. (Academic Press: Orlando, Florida, USA.)
- Roelfs AP 1988. Resistance to leaf and stem rusts in wheat. In 'Breeding Strategies for Resistance to the Rusts of Wheat'. (Eds NW Simmonds and S Rajaram.) pp. 10-22. (CIMMYT: Mexico.)
- Roelfs AP and Bushnell WR (Eds) 1985. 'The Cereal Rusts. Vol. II. Diseases, Distribution, Epidemiology and Control.' (Academic Press: Orlando.)
- Roelfs AP and Martens JW 1988. An international system of nomenclature for *Puccinia graminis* f. sp. *tritici*. *Phytopathology* **78**, 526-533.
- Roelfs AP and McVey DV 1975. Races of *Puccinia graminis* f. sp. *tritici* in the USA during 1974. *Plant Disease Reporter* **59**, 681-685.
- Roelfs AP and McVey DV 1979. Low infection types produced by *Puccinia graminis* f.sp. *tritici* and wheat lines with designated genes for resistance. *Phytopathology* **69**, 722-730.
- Roelfs AP, Long DL and Casper DH 1983. Races of *Puccinia graminis* f. sp. *tritici* in the United States and Mexico in 1981. *Plant Disease* **67**, 82-84.
- Roelfs AP, Casper DH, Long DL and Roberts JJ 1987. Races of *Puccinia graminis* in the United States and Mexico during 1986. *Plant Disease* **71**, 903-907.
- Sears ER and Loegering WQ 1961. A pollen-killing gene in wheat. *Genetics* **46**, 897.
- Sears ER and Loegering WQ 1968. Mapping of stem-rust genes *Sr9* and *Sr16* of wheat. *Crop Science* **8**, 371-373.
- Sears ER, Loegering WQ and Rodenhiser HA 1957. Identification of chromosomes carrying genes for stem rust resistance in four varieties of wheat. *Agronomy Journal* **49**, 208-212.
- Shaner G, Roberts JJ and Finney RE 1972. A culture of *Puccinia recondita* virulent to the wheat cultivar Transfer. *Plant Disease Reporter* **56**, 827-830.
- Shang HS, Dyck PL and Samborski DJ 1986. Inheritance of resistance to *Puccinia recondita* in a group of resistant accessions of common wheat. *Canadian Journal of Plant Pathology* **8**, 123-131.
- Sharma D and Knott DR 1966. The transfer of leaf-rust resistance from *Agropyron* to *Triticum* by irradiation. *Canadian Journal of Genetics and Cytology* **8**, 137-143.
- Sharma HC and Gill BS 1983. Current status of wide hybridization in wheat. *Euphytica* **32**, 17-31.
- Sheen SJ and Snyder LA 1964. Studies on the inheritance of resistance to six stem rust cultures using chromosome substitution lines of a Marquis wheat selection. *Canadian Journal of Genetics and Cytology* **6**, 74-82.
- van Silfhout CH, Grama A, Gerechter-Amitai ZK and Kleitman F 1989a. Resistance to yellow rust in *Triticum dicoccoides* I. Crosses with susceptible *Triticum durum*. *Netherlands Journal of Plant Pathology* **95**, 73-78.
- van Silfhout CH, Kema GHJ and Gerechter-Amitai ZK 1989b. Major genes for resistance to yellow rust in wild emmer wheat. In 'Identification and Characterisation of Resistance to Yellow Rust and Powdery Mildew in Wild Emmer Wheat and Their Transfer to Bread Wheat', pp. 5-15. Ph.D. Thesis. Research Institute for Plant Protection, Wageningen, The Netherlands.
- Simmonds NW and Rajaram S (Eds) 1988. 'Breeding Strategies for Resistance to the Rusts of Wheat.' (CIMMYT: Mexico.)
- Singh H and Johnson R 1988. Genetics of resistance to yellow rust in Heines VII, Soissonais and Kalyansona. In 'Proceedings of the Seventh International Wheat Genetics Symposium'. (Eds TE Miller and RMD Koebner.) pp. 885-890. (Institute of Plant Science Research: Cambridge, UK.)
- Singh H, Johnson R and Seth D 1990. Genes for race-specific resistance to yellow rust (*Puccinia striiformis*) in Indian wheat cultivars. *Plant Pathology* **39**, 424-433.

- Singh RP 1991. Pathogenicity variations of *Puccinia recondita* f. sp. *tritici* and *P. graminis* f. sp. *tritici* in wheat-growing areas of Mexico during 1988 and 1989. *Plant Disease* **75**, 790-794.
- Singh RP 1992a. Genetic association of leaf rust resistance gene *Lr34* with adult plant resistance to stripe rust in bread wheat. *Phytopathology* **82**, 835-838.
- Singh RP 1992b. Genetic association between gene *Lr34* for leaf rust resistance and leaf tip necrosis in bread wheats. *Crop Science* **32**, 874-878.
- Singh RP 1993. Resistance to leaf rust in 26 Mexican wheat cultivars. *Crop Science* **33**, 633-637.
- Singh RP and Gupta AK 1991. Genes for leaf rust resistance in Indian and Pakistani wheats tested with Mexican pathotypes of *Puccinia recondita* f. sp. *tritici*. *Euphytica* **57**, 27-36.
- Singh RP and Gupta AK 1992. Expression of wheat leaf rust resistance gene *Lr34* in seedlings and adult plants. *Plant Disease* **76**, 489-491.
- Singh RP and McIntosh RA 1984a. Complementary genes for resistance to *Puccinia recondita tritici* in *Triticum aestivum* I. Genetic and linkage studies. *Canadian Journal of Genetics and Cytology* **26**, 723-735.
- Singh RP and McIntosh RA 1984b. Complementary genes for resistance to *Puccinia recondita tritici* in *Triticum aestivum* II. Cytogenetic studies. *Canadian Journal of Genetics and Cytology* **26**, 736-742.
- Singh RP and McIntosh RA 1985. Genetic basis of leaf rust resistance in wheat cultivar Mediterranean. *Cereal Rusts Bulletin* **13**, 31-36.
- Singh RP and McIntosh RA 1986a. Cytogenetical studies in wheat XIV. *Sr8b* for resistance to *Puccinia graminis tritici*. *Canadian Journal of Genetics and Cytology* **28**, 189-197.
- Singh RP and McIntosh RA 1986b. Genetics of resistance to *Puccinia graminis tritici* and *Puccinia recondita tritici* in Kenya Plume wheat. *Euphytica* **35**, 245-256.
- Singh RP and McIntosh RA 1987. Genetics of resistance to *Puccinia graminis tritici* in 'Chris' and 'W3746' wheats. *Theoretical and Applied Genetics* **73**, 846-855.
- Singh RP and Rajaram S 1991. Resistance to *Puccinia recondita* f.sp. *tritici* in 50 Mexican bread wheat cultivars. *Crop Science* **31**, 1472-1479.
- Singh RP and Rajaram S 1992. Genetics of adult-plant resistance of leaf rust in 'Frontana' and three CIMMYT wheats. *Genome* **35**, 24-31.
- Singh RP and Saari EE 1990. Biotic stresses in triticale. In 'Proceedings of the Second International Triticale Symposium'. pp. 171-181. (CIMMYT: Mexico.)
- Singh RP, Bechere E and Abdalla O 1992. Genetic analysis of resistance to stem rust in ten durum wheats. *Phytopathology* **82**, 919-922.
- Singh SJ and McIntosh RA 1988. Allelism of two genes for stem rust resistance in triticale. *Euphytica* **38**, 185-189.
- Singh SJ and McIntosh RA 1990. Linkage and expression of genes for resistance to leaf rust and stem rust in triticale. *Genome* **33**, 115-118.
- Smith EL, Schlehner AM, Young HC Jr and Edwards LH 1968. Registration of Agent wheat. *Crop Science* **8**, 511-512.
- Smith GS 1957. Inheritance of stem rust reaction in tetraploid wheat hybrids I. Allelic genes in Mindum Durum and Vernal Emmer. *Agronomy Journal* **49**, 134-137.
- Smith J and Le Roux J 1992. First report of wheat stem rust virulence for *Sr27* in South Africa. *Vorträge für Pflanzenzüchtung* **24**, 109-110.
- Soliman AS, Heyne EG and Johnston CO 1963. Resistance to leaf rust in wheat derived from *Aegilops umbellulata* translocation lines. *Crop Science* **3**, 254-256.
- Soliman AS, Heyne EG and Johnston CO 1964. Genetic analysis of leaf rust resistance in eight differential varieties of wheat. *Crop Science* **4**, 246-248.
- Sorrells ME and Jensen NF 1987. Registration of 'Geneva' winter wheat. *Crop Science* **27**, 1314-1315.
- Stakman EC and Levine MN 1922. The determination of biologic forms of *Puccinia graminis* on *Triticum* spp. *Minnesota Agricultural Research Station Bulletin* **8**.
- Stakman EC and Piemeisel FJ 1917. Biologic forms of *Puccinia graminis* on cereals and grasses. *Journal of Agricultural Research* (Washington DC) **10**, 429-495.
- Stakman EC, Piemeisel FJ and Levine MN 1918. Plasticity of biologic forms of *Puccinia graminis*. *Journal of Agricultural Research* (Washington DC) **15**, 221-250.
- Stakman EC, Stewart DM and Loegering WQ 1962. Identification of physiologic races of *Puccinia graminis* var. *tritici*. Agricultural Research Service E617. (United States Department of Agriculture: Washington DC.)
- Statler GD 1984. Probable genes for leaf rust resistance in several hard red spring wheats. *Crop Science* **24**, 883-886.
- Statler GD and Christianson T 1993. Temperature studies with wheat leaf rust. *Canadian Journal of Plant Pathology* **15**, 97-101.
- Stewart DM, Gilmore EC Jr and Ausemus ER 1968. Resistance to *Puccinia graminis* derived from *Secale cereale*

- incorporated into *Triticum aestivum*. *Phytopathology* **58**, 508-511.
- Stubbs RW 1966. Recent aspects of the physiological specialisation of yellow rust in the Netherlands. In 'Proceedings of the Third European Yellow Rust Conference'. (Eds RCF Macer and MS Wolfe.) pp. 47-54. (Plant Breeding Institute: Cambridge.)
- Stubbs RW 1967. Influence of light intensity on the reactions of wheat and barley seedlings to *Puccinia striiformis*. *Phytopathology* **57**, 615-617.
- Stubbs RW 1985. Stripe rust. In 'The Cereal Rusts'. Vol II. (Eds AP Roelfs and WR Bushnell.) pp. 61-101. (Academic Press: Orlando, Florida, USA.)
- Stubbs RW 1988. Pathogenicity analysis of yellow (stripe) rust of wheat and its significance in a global context. In 'Breeding Strategies for Resistance to the Rusts of Wheat'. (Eds NW Simmonds and S Rajaram.) pp. 23-38. (CIMMYT: Mexico.)
- Stubbs RW and Yang H-A 1988. Pathogenicity of *Puccinia striiformis* for wheat cultivars with resistance derived from rye. In 'Proceedings of the Seventh European and Mediterranean Cereal Rusts Conference'. (Ed. B Zwatz.) pp. 110-112. (Federal Institute of Plant Protection: Vienna, Austria.)
- Stubbs RW, Fuchs E, Vecht H and Basset EJW 1974. The international survey of factors of virulence of *Puccinia striiformis* Westend. in 1969, 1970 and 1971. Technische Bericht Nr.21, Nederlands Graan-Centrum, Wageningen, The Netherlands.
- Stubbs RW, Prescott JM, Saari EE and Dubin HJ 1986. 'Cereal Disease Methodology Manual.' (CIMMYT: Mexico.)
- Sunderwirth SD and Roelfs AP 1980. Greenhouse evaluation of the adult plant resistance of *Sr2* to wheat stem rust. *Phytopathology* **70**, 634-637.
- Syme JR 1983. Flinders. *Journal of Australian Institute of Agricultural Science* **49**, 42.
- Syme JR, Law DP, Martin DJ and Rees RG 1983. Bass. *Journal of the Australian Institute of Agricultural Science* **49**, 46-47.
- Taylor AJ, Smith GMB and Johnson R 1981. Race-specific genetic factors for resistance to *Puccinia striiformis* in wheat cultivars from the Plant Breeding Institute. *Cereal Rusts Bulletin* **9**, 33-45.
- The TT 1973a. Chromosome location of genes conditioning stem rust resistance transferred from diploid to hexaploid wheat. *Nature New Biology* **241**, 256.
- The TT 1973b. Transference of Resistance to Stem Rust from *Triticum monococcum* L. to Hexaploid Wheat. PhD Thesis, The University of Sydney.
- The TT and Baker EP 1970. Homoeologous relationships between two *Agropyron intermedium* chromosomes and wheat. *Wheat Information Service* **31**, 29-31.
- The TT and McIntosh RA 1975. Cytogenetical studies in wheat VIII. Telocentric mapping and linkage studies involving *Sr22* and other genes in chromosome 7AL. *Australian Journal of Biological Sciences* **28**, 531-538.
- The TT, McIntosh RA and Bennett FGA 1979. Cytogenetical studies in wheat IX. Monosomic analyses, telocentric mapping and linkage relationships of genes *Sr21*, *Pm4*, and *Mle*. *Australian Journal of Biological Sciences* **32**, 115-125.
- The TT, Latter BDH, McIntosh RA, Ellison FW, Brennan PS, Fisher J, Hollamby GJ, Rathjen AJ and Wilson RE 1988. Grain yields of near-isogenic lines with added genes for stem rust resistance. In 'Proceedings of the Seventh International Wheat Genetics Symposium'. (Eds TE Miller and RMD Koebner.) pp. 901-906. (Institute of Plant Science Research: Cambridge.)
- The TT, Gupta RB, Dyck PL, Appels R, Höhmann U and McIntosh RA 1992. Characterisation of stem rust resistant derivatives of wheat cultivar Amigo. *Euphytica* **58**, 245-252.
- Townley-Smith TF, Czarnecki EM, Campbell AB, Dyck PL and Samborski DJ 1993. AC Minto hard red spring wheat. *Canadian Journal of Plant Science* **73**, 1091-1094.
- Valkoun J, Kucerova D and Bartos P 1986. Transfer of stem rust resistance from *Triticum monococcum* L. to *T. aestivum* L. Sbornik UVTIZ, Genetika a Slechteni **22**, 9-16. Cited in Plant Breeding Abstracts **56**, 4701, p. 504.
- deVallavieille-Pope C and Line RF 1990. Virulence of North American and European races of *Puccinia striiformis* in North American, world, and European differential wheat cultivars. *Plant Disease* **74**, 739-743.
- de Vallavieille-Pope C, Picard-Formerly H, Radulovic S and Johnson R 1990. Specific resistance factors to yellow rust in seedlings of some French wheat varieties and races of *Puccinia striiformis* Westend. in France. *Agronomie* **2**, 103-113.
- Vasil V, Castillo AM, Fromm ME and Vasil IK 1992. Herbicide resistant fertile transgenic wheat plants obtained by microprojectile bombardment of regenerable embryogenic callus. *Bio/Technology* **10**, 667-674.
- Villareal RL and Rajaram S 1988. 'Semi Dwarf Bread Wheats, Names, Parentages, Pedigrees and Origins.' (CIMMYT: Mexico.)

- Walker JC 1976. 'Plant Pathology.' (Tata McGraw-Hill Publishing: New Delhi.)
- Waterhouse WL 1933. On the production of fertile hybrids from crosses between vulgare and Khapli emmer wheats. *Proceedings of the Linnean Society of New South Wales* **58**, 99-104.
- Waterhouse WL 1952. Australian rust studies IX. Physiologic race determinations and surveys of cereal rusts. *Proceedings of the Linnean Society New South Wales* **77**, 209-258.
- Watson IA 1957. Further studies on the production of new races from mixtures of races of *Puccinia graminis* var. *tritici* on wheat seedlings. *Phytopathology* **47**, 510-512.
- Watson IA 1962. 'Wheat Leaf Rust in Australia. Strain variations for the period 1951-61. Commonwealth Cereal Rust Survey Report No. 1.' (The University of Sydney: Sydney.)
- Watson IA and Baker EP 1943. Linkage of resistance to *Erysiphe graminis tritici* and *Puccinia triticiniae* in certain varieties of *Triticum vulgare* Vill. *Proceedings of the Linnean Society New South Wales* **68**, 150-152.
- Watson IA and Butler FC 1984. 'Wheat Rust Control in Australia, National Conferences and Other Initiatives and Developments.' (University of Sydney: Sydney.)
- Watson IA and Luig NH 1958. Somatic hybridization in *Puccinia graminis tritici*. *Proceedings of the Linnean Society of New South Wales* **83**, 190-195.
- Watson IA and Luig NH 1961. Leaf rust on wheat in Australia: a systematic scheme for the classification of strains. *Proceedings of the Linnean Society of New South Wales* **86**, 241-250.
- Watson IA and Luig NH 1963. The classification of *Puccinia graminis* var. *tritici* in relation to breeding resistant varieties. *Proceedings of the Linnean Society of New South Wales* **88**, 235-258.
- Watson IA and Luig NH 1966. *Sr15* — a new gene for use in the classification of *Puccinia graminis* var. *tritici*. *Euphytica* **15**, 239-250.
- Watson IA and Luig NH 1968. Progressive increase in virulence in *Puccinia graminis* f. sp. *tritici*. *Phytopathology* **58**, 70-73.
- Watson IA and de Sousa CNA 1983. Long distance transport of spores of *Puccinia graminis tritici* in the southern hemisphere. *Proceedings of the Linnean Society of New South Wales* **106**, 311-321.
- Watson IA and Stewart DM 1956. A comparison of the rust reaction of wheat varieties Gabo, Timstein, and Lee. *Agronomy Journal* **48**, 514-516.
- Weeks JT, Anderson OD and Belchl AE 1993. Rapid production of multiple independent lines of fertile transgenic wheat (*Triticum aestivum*). *Plant Physiology* **102**, 1077-1084.
- Wellings CR 1986. Host : Pathogen Studies of Wheat Stripe Rust in Australia. PhD Thesis, University of Sydney.
- Wellings CR 1992. Resistance to stripe (yellow) rust in selected spring wheats. *Vorträge für Pflanzzüchtung* **24**, 273-275.
- Wellings CR and Burdon JJ 1992. Variability in *Puccinia striiformis* f.sp. *tritici* in Australasia. *Vorträge für Pflanzzüchtung* **24**, 114.
- Wellings CR and Luig NH 1984. Wheat rusts, the old and the new. *Australian Institute of Agricultural Science, Occasional Publication* **15**, 5-15.
- Wellings CR and McIntosh RA 1990. *Puccinia striiformis* f.sp. *tritici* in Australasia: pathogenic changes during the first 10 years. *Plant Pathology* **39**, 316-325.
- Wellings CR, Wong PTW and Murray GM 1985. Use of multiple regression to examine the effect of leaf rust and yellow spot on yield of wheat in northern New South Wales. *Australasian Plant Pathology* **14**, 62-64.
- Wellings CR, McIntosh RA and Walker J 1987. *Puccinia striiformis* f. sp. *tritici* in Australia — possible means of entry and implications for plant quarantine. *Plant Pathology* **36**, 239-241.
- Wellings CR, McIntosh RA and Hussain M 1988. A new source of resistance to *Puccinia striiformis* f. sp. *tritici* in spring wheats (*Triticum aestivum*). *Plant Breeding* **100**, 88-96.
- Wells DG, Bonnemann JJ, Gardiner WS, Finney KF, Giese HA and Szymiest CE 1983. Nell wheat. *Crop Science* **23**, 804-805.
- Wiese MV 1977. 'Compendium of Wheat Diseases.' (American Phytopathology Society: St Paul, Minnesota, USA.)
- Wiggin HC 1955. Monosomic analysis of stem rust reaction and awn expression in Kentana 52 wheat. *Journal of Heredity* **46**, 239-242.
- Williams E Jr and Johnston CO 1965. Effect of certain temperatures on identification of physiologic races of *Puccinia recondita* f. sp. *tritici*. *Phytopathology* **55**, 1317-1319.
- Williams ND and Kaveh H 1976. Relationships of genes for reaction to stem rust from 'Marquis' and 'Reliance' wheat to other Sr genes. *Crop Science* **16**, 561-564.
- Williams ND and Maan SS 1973. Telosomic mapping of genes for resistance to stem rust of wheat. In 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 765-770. (University of Missouri: USA.)
- Wilson J and Shaner G 1989. Inheritance of the leaf rust resistance of four triticale cultivars. *Phytopathology* **79**,

731-736.

- Wolfe MS, Brändle U, Koller B, Limpert E, McDermott JM, Müller K and Schaffner D 1992. Barley mildew in Europe, population biology and host resistance. *In* 'Breeding for Disease Resistance'. (Eds R Johnson and GJ Jellis.) pp. 125-139. (Kluwer Academic Press: Dordrecht.)
- Worland AJ 1988. Studies of the resistance of wheat to yellow rust. 1987 Annual Report, pp. 8-9. (Institute of Plant Science Research: Cambridge.)
- Worland AJ and Law CN 1986. Genetic analysis of chromosome 2D of wheat I. The location of genes affecting height, day-length insensitivity, hybrid dwarfism and yellow-rust resistance. *Zeitschrift für Pflanzenzüchtung* **96**, 331-345.
- Worland AJ, Law CN, Hollins TW, Koebner RMD and Giura A 1988. Location of a gene for resistance to eyespot (*Pseudocercospora herpotrichoides*) on chromosome 7D of wheat. *Plant Breeding* **101**, 43-51.
- Xin ZY, Johnson R, Law CN and Worland AJ 1984. A genetic analysis of genes for yellow rust resistance in the winter wheat variety Feng-Kang 13. *Acta Agronomica Sinica* **10**, 217-222.
- Yang H-A and Stubbs RW 1990. Gene postulation for wheat stripe rust resistance on Chinese differential hosts. *Acta Phytologica Sinica* **17**, 67-72.
- Zadoks JC 1961. Yellow rust on wheat. Studies in epidemiology and physiologic specialization. *Tijdschrift Over Plantenziekten* **67**, 69-256.
- Zeller FJ 1973. 1B/1R wheat-rye chromosome substitutions and translocations. *In* 'Proceedings of the Fourth International Wheat Genetics Symposium'. (Eds ER Sears and LMS Sears.) pp. 209-221. (Agricultural Experiment Station, University of Missouri: Columbia, Missouri, USA.)
- Zeller FJ and Hsam SLK 1983. Broadening the genetic variability of cultivated wheat by utilizing rye chromatin. *In* 'Proceedings of the Sixth International Wheat Genetics Symposium'. (Ed. S Sakamoto.) pp. 161-173. (Faculty of Agriculture, Kyoto University: Japan.)
- Zeller FJ and Oppitz K 1977. Monosomic analysis for localizing the gene SrEC for resistance to stem rust in the wheat cv. 'Etoile de Choisy'. *Zeitschrift für Pflanzenzüchtung* **78**, 79-82.
- Zeven AC and Zeven-Hissink NCh 1976. 'Genealogies of 14,000 Wheat Varieties.' (Netherlands Cereal Centre-NGC: Wageningen, The Netherlands.)
- Zwer PK, Park RF and McIntosh RA 1992. Wheat stem rust in Australia — 1969-1985. *Australian Journal of Agricultural Research* **43**, 399-431.

# APPENDIX I

## Species Names Used in the Text, Genomic Formulae and Synonyms

SPECIES	GENOMIC FORMULA	SYNONYM
1. DIPLOIDS (2n= 14)		
<i>Triticum monococcum</i> L.	AA	<i>T. boeoticum</i> Boiss.
<i>Triticum comosum</i> (Sibth. & Sm.) Richter	MM	<i>Aegilops comosa</i> Sibth. & Sm.
<i>Triticum speltoides</i> (Tausch) Gren ex Richter	SS	<i>Ae. speltoides</i> Tausch
<i>Triticum tauschii</i> (Coss.) Schal.	DD	<i>Ae. squamosa</i> L.
<i>Triticum umbellulatum</i> (Zhuk.) Bowden	UU	<i>Ae. umbellulata</i> Zhuk.
<i>Secale cereale</i> L.	RR	
<i>Thinopyrum disichum</i> (Thunb.) Löve	JJ	<i>Agropyron distichum</i> (Thunb.) Beauv.
2. TETRAPLOIDS (2n = 28)		
<i>Triticum turgidum</i> L.	AABB	<i>T. dicoccoides</i> Körn <i>T. dicoccum</i> Schronk <i>T. durum</i> Desf.
<i>Triticum timopheevii</i> (Zhuk.)	AAGG	<i>T. timopheevii</i> Zhuk. <i>T. araraticum</i> Jakubz.
<i>Triticum ventricosum</i> Ces.	DDUnUn	<i>Ae. ventricosa</i> Tausch
3. HEXAPLOIDS (2n = 42)		
<i>Triticum aestivum</i> L.	AABBDD	<i>T. macha</i> Dek. & Men., <i>T. spelta</i> L., <i>T. vulgare</i> Host
<i>Thinopyrum intermedium</i> (em Thell. Host) Barkworth & Dewey	E <sub>1</sub> E <sub>1</sub> E <sub>2</sub> E <sub>2</sub> XX	<i>Agropyrum intermedium</i> (Host) P. Beauv.
4. DECAPLOID (2n = 70)		
<i>Thinopyrum ponticum</i>		<i>Agropyron elongatum</i> (Host) Beauv. <i>Lophopyrum ponticum</i> (Podp.) Löve

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