

PI 562612 to 562619. *Triticum aestivum* L., nom. cons. POACEAE Common wheat

**Donated by:** Patterson, F.L., Purdue University Agr. Exp. Sta., West Lafayette, Indiana 47907, United States; and Agricultural Research Service, West Lafayette, Indiana 47907, United States. Received September 24, 1992.

PI 562612 **origin:** United States. **developed:** F.L. Patterson, F.B. Maas III, J.E. Foster, R.H. Ratcliffe, S. Cambron, G. Safranski, P.L. Taylor, H.W. Ohm. **origin institute:** Indiana Agric. Exp. Station/USDA-ARS, Purdue University, West Lafayette, Indiana 47907 United States. **origin institute id:** IN86910A1-1-1. **cultivar:** CAROL. **pedigree:** Newton-207\*5/Larned. **remarks:** Resistance gene H3H3 is a single-gene resistance to Hessian fly in a background of Newton hard red winter wheat. Developed by 2-6 backcrosses to a single typical plant of Newton, selection 207 or its selfed progeny, followed by 3-5 generations of plant selection. Tested to biotypes B, C, D & L of Hessian fly to verify recovery of typical resistant reactions. Tested as seedlings in growth chambers at 18 deg. C. Reactions were typical. Adequate winterhardiness for testing in many areas of US for determining the value of individual genes providing resistance to Hessian fly. Breeding Material. Seed.

PI 562613 **origin:** United States. **developed:** F.L. Patterson, F.B. Maas III, J.E. Foster, R.H. Ratcliffe, S. Cambron, G. Safranski, P.L. Taylor, H.W. Ohm. **origin institute:** Indiana Agric. Exp. Station/USDA-ARS, Purdue University, West Lafayette, Indiana 47907 United States. **origin institute id:** IN85132A2-1-1. **cultivar:** ERIN. **pedigree:** Newton-207\*7/Arthur 71. **remarks:** Resistance gene H5H5 is a single-gene resistance to Hessian fly in a background of Newton hard red winter wheat. Developed by 2-6 backcrosses to a single typical plant of Newton, selection 207 or its selfed progeny, followed by 3-5 generations of plant selection. Tested to biotypes B, C, D & L of Hessian fly to verify recovery of typical resistant reactions. Tested as seedlings in growth chambers at 18 deg. C. Reactions were typical. Adequate winterhardiness testing in many areas of US for determining the value of individual genes providing resistance to Hessian fly. Breeding Material. Seed.