

From the Oat Newsletter, volume 37, 1986:

The 1986 Oat Newsletter is dedicated to  
Harold G. Marshall  
and  
Paul G. Rothman  
in recognition of years of excellent service to oat improvement

DEDICATION  
To Paul G. Rothman



Dr. Paul G. Rothman, Research Plant Pathologist at the Cereal Rust Laboratory and longtime oat researcher, retired on September 30, 1986, after 31 years of federal service. Dr. Rothman is a native of Michigan and a graduate of Michigan State University with B.S. and M.S. degrees. He received his Ph.D. degree from the University of Illinois in 1955. He was then employed by the Agricultural Research Service of the USDA and assigned to the Oat Investigations project at Stoneville, Mississippi. In 1967 he transferred to the USDA Cereal Rust Laboratory, located with the Plant Pathology Department on the University of Minnesota Campus in St. Paul. In addition to his federal employment he had an adjunct faculty appointment with the University.

Dr. Rothman is particularly noted for his development of rust resistant oat germplasm for use by oat breeders throughout the world. He has made many interspecies crosses from which he transferred rust resistance from lower ploidy species to the agriculturally adapted hexaploid oats. His work overcame many interspecies fertility problems and yielded rust resistant progeny lines that readily intercross with common oats. Much of

the germplasm that Dr. Rothman developed is resistant to stem rust, crown rust, and barley yellow dwarf. Many of the stem rust resistant lines have been effective to all known races and isolates.

One of his earlier germplasm releases was a combination of Pg-11 (seedling susceptible, adult-plant resistant) with Pg-12 (seedling resistant, but moderately susceptible as adult plants). Another early release combined Pg-12 with slow rusting from Avena sterilis, giving rise to widely resistant Pg-a in lines designated as Alpha and Omega. Resistance from Alpha has been utilized in the development of commercial cultivars Mesquite II and TAM-O-386. Other derivatives have been entered in advanced regional test nurseries.

More recent germplasm releases have included a combination of Pg-6 and Pg-7 from Avena strigosa into hexaploid oats. Among the most interesting germplasm developed are lines from the cross of tetraploid Avena magna with diploid Avena longiglumis, providing fertile hexaploid oats, designated Amagalon. A number of derivatives from these lines have been placed in the National Oat Collection at Beltsville and are available to oat breeders worldwide.

Dr. Rothman was also a participant in the breeding of a number of oat cultivars released jointly by the Minnesota Agricultural Experiment Station and the USDA. Several of these possess a degree of resistance to crown rust which appear to be general in nature. The best known of these is the recently widely grown cultivar, Moore. In these efforts he has worked in cooperation with Deon Stuthman, Minnesota oat breeder and the late Matt Moore, longtime Minnesota Plant Pathologist.

Dr. and Mrs. Rothman are remaining in St. Paul.