DEDICATION OF 1998 ARMYWORM SYMPOSIUM TO DR.BILLY RAY WISEMAN: PLANT RESISTANCE EXPERT

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ABSTRACT

Dr. Billy Ray Wiseman of et al. the United States Department of Agriculture, Agricultural Research Service, Insect Biology & Population Management Research Laboratory at Tifton, GA has authored or co-authored over 300 refereed scientific papers, book chapters, review papers and/or bibliographies dealing primarily with plant resistance to insect pests, especially lepidopterans attacking corn and sorghum. He and his co-workers have released over 80 germplasm lines of corn and sorghum resistant to the fall armyworm, *Spodoptera frugiperda* (J. E. Smith), corn earworm, *Helicoverpa zea* (Boddie), and sorghum midge, *Contarinia sorghicola* (Coquillett), during his 31 years of federal service. Additionally, his field and laboratory techniques are widely used by researchers around the world.

Key Words: Fall armyworm, host plant resistance

RESUMEN

El Dr. Billy Ray Wiseman del Departamento de Agricultura de los Estados Unidos, Servicio de la Investigación Agrícola, Laboratorio de Investigaciones sobre la Biología del Insecto y el Manejo de Poblaciones, en Tifton, GA, ha producido o co-producido más de 300 escritos científicos arbitrados, capítulos de libros, reseñas y/o bibliografías que tratan principalmente sobre resistencia de las plantas a insectos plaga, especialmente insectos lepidópteros que atacan al maíz y al sorgo. Durante sus 31 años de servicio federal, él y sus colegas han plantado más de 80 líneas de germoplasma de maíz y sorgo que son resistentes al gusano cogollero del maíz, *Spodoptera frugiperda* (J. E. Smith), al gusano del elote del maíz, *Helicoverpa zea* (Boddie), y a la mosquita del sorgo, *Contarinia sorghicola* (Coquillett). Adicionalmente, sus técnicas de campo y de laboratorio son utilizadas por investigadores en todo el mundo.

The 1998 Armyworm Symposium is dedicated to Dr. Billy Ray Wiseman (Fig. 1), for his many contributions to plant resistance, especially to corn and sorghum insect pests.

Billy was born March 28, 1937, as the fourth child of Calvin and Beulah Wiseman of Sudan, TX. He was raised on a farm and received all of his secondary education from the Sudan school system. His high school activities included sports (football and basketball) and being a member and officer of the Future Farmers of America. Billy's senior year was highlighted when named valedictorian of his class.

After graduation, he entered Arlington State College and finished his undergraduate B.S. Degree in Agricultural Education at Texas Tech in 1959. His graduate degrees were earned from Kansas State University under the direction of Dr. Reginald Painter, the father of host plant resistance to insects. In 1961, Billy received a M.S.

Fig. 1. Dr. Billy Ray Wiseman: Plant Resistance Expert.

Degree with a double major in Entomology and Horticulture. At this point, he obtained a direct commission as an officer in the U.S. Army Medical Service Corp and served about three years in the Womack Army Hospital's Preventive Medicine Section at Fort Bragg, NC. It was during this period that he met an Army nurse named Gladys Mary Striegler from Hye, TX. A romance began that led to their marriage on November 2, 1963.

After completion of military duty, Billy and Gladys returned to Kansas State University where he pursued a doctoral degree in Entomology. October 3, 1966 was a special day in Billy's life. On this day, Billy passed his final Ph.D. orals and Gladys had their first child, William Samuel Wiseman II. Two years later they became the proud parents of a daughter, Amy Lucretia.

Billy began his professional career in 1967 at Stillwater, OK with ARS-USDA under the supervision of entomologist, Harvey Chada. After a year, he transferred to what was then called the Southern Grain Insects Research Laboratory (ARS-USDA) at Tifton, GA where he has served as a research entomologist for the last 31 years. Billy has worked under the directorship of H. C. Cox, Alton Sparks and Charlie Rogers.

During his career, he has authored or co-authored over 300 refereed scientific papers, including 13 book chapters, review papers or bibliographies (see list of fall armyworm papers). His ability to work effectively with his colleagues is evidenced by coauthoring papers with over 110 scientists. Additionally, he and his co-workers have released 80 corn and sorghum germplasm lines having resistance to either the fall armyworm (*Spodoptera frugiperda* (J. E. Smith)], corn earworm [*Helicoverpa zea* (Boddie)], or sorghum midge [*Contarinia sorghicola*]. Billy has continuously transferred useful technologies to his colleagues in the areas of field screening of corn and sorghum for resistance to insect pests, bioassaying for antibiotic plant compounds in the laboratory, and determining mechanisms and bases of resistance. Also, he was a member of the team that discovered the chemical compound, maysin, as the major antibiotic factor in silks of some corn genotypes to the fall armyworm and corn earworm.

Along with his research duties, Billy found time to teach two courses in plant resistance at the University of Florida. For 17 years, he traveled to Gainesville on the weekends to teach students principles of plant resistance and methodologies used in developing insect resistance plants and in understanding the mechanisms and bases of resistance. During these years he also served as graduate advisor for two Ph.D. students and as a committee member for four other students.

Incredibly, Billy, a highly productive bench scientist and part-time teacher, also found the time and energy to provide leadership and service to regional and national entomological societies, corn and sorghum groups and plant resistance workshops and symposiums. He chaired the Entomological Society of America's (ESA) membership committee, served as president of the Southeastern Branch of ESA and as the Branch's representative on the ESA Governing Board. He was one of the organizers of the Southeastern Branch's Armyworm Symposium. Recently, Billy was one of three organizers of two international symposiums on the development of corn resistant to insects held at CIMMYT in Mexico. Proceedings of these symposia provide present and future researchers with a foundation of information on entomological and plant breeding techniques used to develop resistant corn and recent advances and utilization of resistant germplasm. Anyone that has worked with Billy on a conference, symposium or committee soon realizes how efficient and prompt this man is in completing tasks assigned him.

Through the years, Billy's peers have recognized him as an outstanding scientist and cooperator, as an effective entomology leader and as an expert in plant resistance to insects. The following are comments from his peers concerning their thoughts of Billy.

Dr. Wiseman's contributions to fall armyworm control are well-known through his many scientific reports and resistant germplasm releases. Without question these accomplishments have earned him the deserved reputation of host plant resistance expert. Dr. Wiseman's colleagues know him as a scientist who, whether a leader or member of a team, will always give more than is expected to the research effort. Perhaps one of his greatest contributions to armyworm research is how he always inspires and assists other researchers to do their best. From the beginning of my career in entomology, and especially during the past several years, I have benefited greatly from his mentorship.

I have been associated with Billy Wiseman for over thirty years. He has been a gentleman, an outstanding teacher and researcher. He understood host plant resistance when I first met him, but since then he has added much scientific information to our research base. Billy has studied several crops and several insects and their interactions. He is an authority for host plant resistance with corn and the corn earworm and fall armyworm in the field and in the laboratory. Dr. Wiseman is one of the most cooperative scientists I know. He has freely shared his research information, his talent for presenting it, as well as the research tools he has developed. Billy's nature motivates scientists to work cooperatively and collaboratively and makes the world a better place to live as he has shared his talents around the world.

Billy Wiseman is a hard worker, dedicated to increasing our knowledge and understanding of plant resistance to insects. You can count on his use of appropriate experimental design, statistical analysis and interpretation of the data. His interests extend beyond the mechanisms of plant resistance to interactions between plant resistance and other control strategies such as the use of insect pathogens, parasitoids and predators and their potential use in integrated pest management. His love of teaching has helped to keep him current on developments in his area of specialty and made him willing to take the time to explain things to cooperators who come from a different specialty. Billy's enthusiasm and cooperative nature have made it a joy to work with him to investigate interactions between plant resistance and insect pathogens of fall armyworm and corn earworm.

Is Billy Wiseman an expert in host plant resistance? You bet he is! He has spent his career looking at how those crawling creatures interact with so many important crop plants. This does, however, bring up a very important question: Why is he so good at what he does? I think I know the answer. If a DNA analysis of Billy were to be run, the results would probably show a positive match with several corn and sorghum pests. This would help to explain why he knows those pests so well. He is also a positive match with his colleagues. I have cooperated with Billy on many research projects over the past several years. I know him to be an excellent researcher and he is totally unselfish when it comes to sharing data and publishing results. Billy is top notch.

I have known Dr. Billy Wiseman for just a little over 10 years. Yet, it seems like I have known him twice as long. From my perspective, these were all positive experiences. During this time, I have had a good opportunity to see some of his contributions toward the betterment of humanity. He has a continual willingness to aid others without looking for recognition—a true team player. When I worked at the IBPMRL in Tifton, although we were on separate projects, Billy did not hesitate to offer suggestions from his years of experiences. I appreciated his professionalism and quickly recognized and respected his depth of knowledge of host plant resistance, and other subjects. I have published with Billy and because I value his frankness and expertise, I have also asked him to review some of my manuscripts. Not only do I much appreciate his helpful comments, but he always returns the reviews so quickly! Thanks for helping my career along in so many ways. Traveling by car to distant meetings provides a

good opportunity to foster a closer bond with colleagues. It was always a good pleasure to travel with Billy. I recall his long patience and his much agreeableness. Also, I have had the pleasure to become acquainted with his family; he is obviously a caring husband and father. It has been a good pleasure to share part of the highway of life with Billy. Thanks for being such a good role model.

It has been both an extreme privilege and a great benefit to me to have had the opportunity to be both a cooperator and friend of Bill Wiseman. I cannot imagine how lacking my career and my life would have been had I not known him.

Not only do his peers consider him an expert in plant resistance to insects but some have nominated him for special recognition. Some honors that Billy has received are: Fellow of the Entomological Society of America; J. E. Brussart Award (Southeastern Branch of ESA); Achievement Award from the Florida Entomological Society for Significant Contributions to the Science and Technology of Plant Resistance to Insects, and Achievement Award of Excellence as Senior Scientist, USDA-ARS, South Atlantic Area.

Dr. Billy R. Wiseman has distinguished himself as an expert in plant resistance to insects, a highly productive scientist, a mentor to students and colleagues, an extra special collaborator, a leader in entomological activities and a true gentleman. Therefore, it is our pleasure and honor to dedicate the 1998 Armyworm Symposium to Dr. Billy Ray Wiseman—Plant Resistance Expert.

A Listing of B. R. Wiseman's Fall Armyworm Publications (1966-1997)

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