

Dean Lyle Struble, a chemist/entomologist with Agriculture and Agri-Food Canada from 1968 until his retirement in 1996, died 22 April 2014 in White Rock, British Columbia, at the age of 77. Dean worked at the Lethbridge Research Centre as a research scientist from 1968 until 1990, when he was appointed Director of the AAFC Vancouver Research Centre.

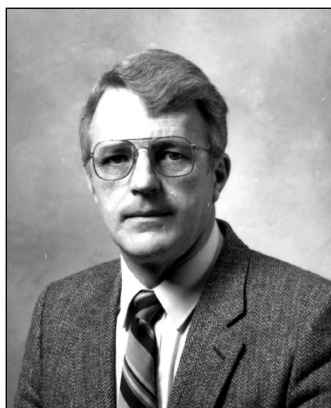
Dean was born 29 August 1936 at Wawota, Saskatchewan. After finishing high school, he farmed for several years before enrolling at the University of Saskatchewan to study chemistry. He graduated from the U of S with a BA (1961) and MA (1962). He worked several years as a chemist with Dupont Canada before returning to the U of S to obtain a PhD in 1966. He was then awarded National Research Council Overseas Fellowships for 1 year's study at Imperial College, London, England, and another year at the University of Adelaide, Australia. He joined the Agriculture Canada Research Station at Lethbridge in January 1968.

Initially, his research involved the analysis of residues in soil and crops of the persistent organochloride and organophosphate insecticides in wide use at that time. However, within a few years he switched his focus to the identification and synthesis of the sex pheromones of pest species of Lepidoptera.

Sex pheromones are produced by female moths in nanogram quantities and in the late 1960s and early 1970s their identification required the extraction of large numbers of moths. Dean speculated that most sex pheromones of Noctuidae would be structurally related to the four that had been reported by 1996. And, therefore, that attractants were most likely to be positional and stereo-isomers of long chain C10 to C18 alcohols, acetates and aldehydes. These chemicals were not available commercially, so he proceeded to synthesize them. Using his synthetic chemistry skills he prepared an extensive library of nearly 200 potential pheromone components of high purity and systematically screened them for pheromone activity in field tests. By this method he developed sex attractants for several pest species and received four Canadian and USA patents.

Subsequently, during a work transfer to Switzerland in 1977, he developed a method using a gas chromatograph linked directly to an electroantennogram which used the living antenna of male moths as a detector (Struble and Arn, 1984). This enabled him to directly determine, from extracts of the ovipositors of only a few female moths, the actual pheromone components and the ratio in which they were present. With this methodology he was able to develop sex attractants for all the main pest species of cutworms prevalent in western Canada and also to resolve a number of taxonomic issues within the Noctuidae. He was recognized nationally and internationally for this research and also for his involvement in several cooperative studies for the utilization of these attractants for population monitoring and prediction of the potential for crop damage. During his career he published many scientific papers in both organic chemistry and entomology, including several book chapters.

During his career, Dean Struble represented Agriculture Canada on many local, national and international committees. He became a Fellow of the Entomological Society of Canada in 1986.



**Dean Lyle Struble
(1936 – 2014)**

In retirement Dean was active in the Canadian Executive Service Organization, serving as a volunteer advisor on several overseas assignments. For a number of years he was also deeply involved in mentoring a Fraser Valley First Nations Band with their business and agriculture development efforts.

He is survived by his wife, Norma, three daughters and 6 grandchildren.

Reference

Struble, D.L. and H. Arn. 1984. Combined gas chromatography and electroantennogram recording of insect olfactory responses. Pp. 161-178 In: H.E. Hummel and T.A. Miller (Eds). Techniques in pheromone research. Springer –Verlag, New York.

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