Dr. G. W. HARMSEN
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Dr. G. W. HARMSEN, former Head of the Department of Soil Microbiology, Institute of Soil Fertility, Groningen, the Netherlands, died on June 2, 1981. He was one of the Executive Editors of ‘Plant and Soil’ from 1957 to 1969.

The son of a merchant, Georg Wilhelm HARMSEN was born in Leningrad, at that time called St. Petersburg, on June 20, 1903. His father was Dutch, although he was born and worked in Russia, and his mother was from the Baltic republic of Latvia. He started secondary education in his native town but did not complete the program because of the outbreak of the Russian Revolution. The family moved to the Netherlands where the young HARMSEN completed secondary school. Thereafter he enrolled at the Agricultural University at Wageningen where he started to study agricultural science with microbiology as his specialization.

He had a good command of the Russian language owing to the fact that he spent the greater part of his youth in Russia; this facilitated his contacts with Russian colleagues and enabled him to read the Russian literature.

After finishing his studies at Wageningen, where he obtained his training in microbiology from Söhnge and Wieringa, HARMSEN moved to the small town of Medemblik on the west coast of the Zuiderzee. The gradual reclamation of part of this inland sea had started there, resulting in the completion of the first big polder, the Wieringermeer (20,000 ha), in 1930. This project had been preceded by the formation of a small experimental polder where soil scientists and agronomists studied various characteristics of the reclaimed soil. As several of the problems they encountered had a microbiological origin, the Research Department of the Zuiderzee Reclamation Authority founded a microbiological laboratory and HARMSEN became the first soil microbiologist of this laboratory.

One of the first major subjects that attracted the attention of the soil scientists, including HARMSEN, was the formation of pyrite (FeS₂), which occurred in moderate amounts in the reclaimed soils. Up to that time pyrite formation had been thought to take place only under strictly anaerobic conditions in deep layers of the water-soaked soils. Extensive analytical work by HARMSEN and his colleagues made it clear that pyrite is (also) produced in young marine formations in the presence of organic residues. In addition to anaerobic conditions required for the microbiological production of hydrogen sulphide from sulphate, oxygen is temporarily required for oxidizing part of the sulphide to sulphur which makes up part of the pyrite.

Much attention was also paid to the oxidation of pyrite in the reclaimed soils. This is an important phenomenon because the resulting sulphuric acid formation leads to acidification of the soil and deterioration of soil fertility. Extreme