

Contributions of Pietro Rotili

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Pietro Rotili died at Lodi, Italy on December 23, 2002. Dr. Rotili was the director of the experiment station at Lodi and a widely recognized alfalfa geneticist. Dr. Rotili was generous in his recognition of the work of others and a gracious host to those visiting his research station.

Dr. Rotili advanced a group of ideas about alfalfa breeding that are affectionately referred to as the European school of thought. He felt that the role of the plant breeder was not primarily to create new varieties, but to develop breeding methods and scientific understanding so that improvement of the species would be possible. He advocated mild inbreeding before imposing selection to better reveal physiological traits, to reduce the genetic load, and to concentrate favorable genes and linkages. He and his associates proposed a method of variety synthesis that he called “free hybrid”, which included selection among S_2 plants followed by controlled crossing among 4 or 8 unrelated S_2 parents which expressed good combining ability.

Pietro Rotili conducted a series of unique experiments to define the role of plant to plant competition in the sward, and to relate these findings to plant breeding methodology. He advocated greater uniformity among plants within a variety through the development of narrow based synthetic or “free hybrid” varieties. He stressed the importance of synchronizing physiological processes of the member plants of the sward. He warned that increasing heterogeneity in a variety for the sake of promoting heterozygosity would, at some point, increase plant to plant variation in the sward and consequently reduce productivity and persistence of the variety.

Dr. Rotili and his associates have published many scientific papers that contribute to our understanding of alfalfa breeding. This report is to recognize the importance of his work and the friendship and encouragement that he so generously gave to his fellow members of the scientific community.

Rotili's main paper on alfalfa breeding

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- Pietro Rotili was born in Marano Equo, near Rome, on January 18, 1931 and died at Lodi on December 23, 2002.