



# Garden Clover



ROTHAMSTED  
RESEARCH

This is the smallest (and simplest) of Rothamsted's famous classical, long-term experiments; known as "classical" because they started between 1843 and 1856, of which seven continue to this day. It was established because Lawes and Gilbert found that red clover (*Trifolium pratense*), although a perennial, seldom survived through the winter in experiments sown on the Rothamsted farm. So, in 1854, they laid down this plot in what was then the kitchen garden to see if it would be more persistent in a "richer" soil. It is almost certain that poor survival resulted,

in large part, from most of the fields being badly infested with soil-borne pests and pathogens, including nematodes and the fungus *Sclerotinia trifoliorum*, the cause of clover rot. These factors were not understood at the time.

Yields were very large for the first 10 years, averaging about 10 tons of dry matter per hectare, probably because the well-manured garden soil was rich in nutrients and because the most damaging pests and pathogens were absent. Reasonable yields continued over the next 30 years but, thereafter, yields showed a marked

decline, as pests and pathogens moved in. Commonly, as on the farm, the red clover died during the winter, and so the plot often had to be re-sown in the spring.

At different times between 1956 and 1990, the plot was sub-divided to test the effects on clover survival and yield of various nutrients and pesticides. The plot is now treated uniformly, and is currently sown with the cultivar Milvus red clover, which has good resistance to clover rot and stem eelworm; re-sowing is relatively infrequent, and yields are similar to those obtained in the early years.



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