

Timo Goeschl (University of Cambridge, UK)
Timothy Swanson (University College London, UK)

tg203@cam.ac.uk

Pests, Plagues and Patents

Abstract

This paper investigates a particular aspect of the biotechnology industry, namely the interaction between dynamic forms of incentive mechanisms for biotechnological innovations (patent systems) and dynamic forms of biological problems (adaptations of pests and pathogens). Starting from the observation that – in contrast to technological problems in other sectors – many important biological problems are recurrent, we show that the design of the incentive mechanism must take into account: a) the need for investments into biotechnological R&D that take into account the impermanence of the solution concepts in this industry; and b) the impact of this impermanence on the anticipated life span of any patent awarded to a biotechnological innovator. The results indicate that the current practice of rewarding biotechnological innovations under a non-specific patent system will not provide the correct incentives for the biotechnology industry to optimally manage recurrent biological problems.