The Economist urges regulators not to squander genetic revolution unfolding in agriculture and medicine

Thanks to great strides in fundamental research, biology is becoming ever more programmable. Two recent scientific advances show just how powerful the possibilities could be.

The genetic modification of plants is allowing the mechanism of photosynthesis to be tinkered with, as research published in Science on August 18th sets out. This could lead to dramatic improvements in the productivity of plants, and eventually to a second green revolution.

Tweaking the genes of people who suffer from fatal incurable diseases, meanwhile, has also had remarkable results. A series of genetic therapies has arrived, or is arriving, in clinics to treat blood cancers, spinal muscular atrophy, haemophilia and sickle-cell disease. The task now is to spread these gains far and wide.

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Regulators also need to be quicker and more understanding of the gains to society from helping these technologies reach their potential. Innovations can languish without appropriate or timely rule-making. The regulation of genetically modified crops has been held back by misinformation campaigns, delaying benefits and raising costs. Likewise, although experimental drugs obviously need scrutiny, regulators should remember that the alternative in otherwise untreatable genetic diseases is often death. Science has made a genetic revolution possible. Now that revolution must flourish.

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