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Genetically modified sugar beet is good for the environment  
THOUGH often conflated in the public mind, arguments against the planting of genetically modified (GM) crops fall into two distinct groups. One, which applies only to food crops, is that they might, for some as yet undemonstrated reason, be harmful to those who eat them. The other, which applies to them all, is that they might be bad for the environment. Proponents of the technology counter that in at least some cases GM crops should actually be good for the environment. Crops that are modified to produce their own insecticides should require smaller applications of synthetic pesticides of the sort that Greens generally object to. But in the case of those modified to resist herbicides the argument is less clear-cut. If farmers do not have to worry about poisoning their own crops, environmentalists fear, they will be more gung-ho about killing the wild plants that sit at the bottom of the food chain and keep rural ecosystems going-or weeds, as they are more commonly known. Research just published in the Proceedings of the Royal Society suggests, however, that it may be possible for all to have prizes. Get the dose and timing right and you can have a higher crop yield and a higher weed yield at the same time-and also use less herbicide. The research was done at Brooms Barn Research Station

in Suffolk , by a team led by Mike May , the head of the stations weeds group. The team was studying GM sugar beet. This was one of the species examined in the British governments Farm-Scale Evaluations ( FSEs ) project , a huge , three-year-long research programme designed to assess the effects ( including the environmental effects ) of herbicide use on GM crops. The results for sugar beet , which competes badly with common weed species and thus relies heavily on the application of herbicides for its success , came in for particular criticism from environmentalists when the trials concluded in 2003. They indicated that fields planted with GM beet and treated with glyphosate , the herbicide against which the modification in question protects , had fewer weeds later in the season. These produced fewer seeds and thus led to reduced food supplies for birds. Some invertebrates , particularly insects , were also adversely affected. The Brooms Barn researchers , however , felt that this problem might be overcome by changing the way the glyphosate was applied. They tried four different treatment "regimes" , which varied the timing and method of herbicide spraying , and compared them with conventional crop-management regimes such as those used in the FSEs. The best results came from a single early-season application of glyphosate. This increased crop yields by 9% while enhancing weed-seed production up to sixteen-fold. And , as a bonus , it required 43% less herbicide than normal. Genetic modification , it seems , can be good for the environment , as well as for farmers pockets. 100Test 下载频道开通 , 各类考试题目直接下载。详细请访问 [www.100test.com](http://www.100test.com)