

Biotech potatoes: A case study of how genetic engineering can improve our food supply

To help demonstrate the power of biotechnology, consider the following analogy: Imagine you have two decks of cards, one red and one blue, and each deck contains all the genes of a potato. The red deck makes a great potato, but lacks resistance to late blight disease. The blue deck has late blight resistance but these potatoes are unmarketable.

To get the blue ace of spades (LB resistance) together with the rest of the red deck (good potatoes), you could shuffle the two together and divide the deck in two You can keep shuffling this new deck with more red cards, but imagine how many times you would have to shuffle the cards to get a perfect deck

Compare this with simply picking out the blue ace of spades and placing it into the red deck. Wouldn't that be easier? This is essentially the difference between using traditional breeding (shuffling) and biotechnology (stacking the deck).

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Together with new breeding technologies genetic modification remains a useful tool in the genetic improvement of potatoes. The 100-plus wild species relatives of potato provide a virtually endless source of traits that can be incorporated into elite varieties relatively easily and quickly.

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