

Genetics gives food for thought

A kinder, gentler hamburger through genetic modification



Robb Egan
THE CLACKAMAS PRINT

Genetic engineering and modification of food sources in its current implementation may be misguided and even dangerous, but that doesn't mean we should give up the practice completely. The genetic modification of food sources such as plants, and genetic engineering in general, is an important and logical next step in human scientific development. Modern genetic science is at its best, using bacteria or the ability to engineer DNA segments to produce genes from one species into another. Because of the still limited (though vast) nature of genetic testing, the accompanying research and the effects these modifications produce, modern scientists are often completely clueless as to how an organism will react to the introduction of foreign genes. Because of our lack of understanding, and due to a fair amount of self-serving campaigning on the part of Greenpeace and a few other organizations, genetic engineering has caught a bad rap with the general populace.

There's a vast body of data and research, accompanied and preceded by a vast body of analysis, which shows the risks of crops and foods and the risks of biotechnology are not different from those we are experienced with from traditional foods. If there are any associated with these new foods, the data and experience seems to indicate that they are equal to or less than what we've seen in the past," said Giddings, genetic scientist and Vice President of the Biotechnology Industry Organization.

Genetic modification of crops has its own success stories, too. For example, millions of acres of bio-modified cotton have been grown throughout China. This has led to much higher crop yields and the significantly reduced application of pesticides.

With the continuing population growth, if we ever hope to rid the world of famine and hunger, something needs

to be done to drastically increase the yields of food crops. While modern agricultural techniques may technically be sufficient to provide everyone with just enough to survive and be healthy, the lack of any sort of agricultural surplus would be disastrous, as one bad season, one drought or even just a slightly colder winter could result in shortages. Consequently food costs would escalate, pretty much putting us back to square one again, with the rich being overfed while the poor are left to starve.

Genetic engineering of food sources may not be some magical answer to the problem of world hunger, but it's definitely a step in the right direction. If nothing else, it may serve as a temporary measure until a more permanent and natural solution can be found.

And genetic research of any kind can't help but further the advancement of other scientific fields. Even if genetic engineering doesn't cure the world's hunger problem, it will almost certainly be the answer to ridding ourselves of disease. In terms of medical science alone, there is a lot that can be learned from researching how organisms will react to gene splicing and such. Who knows, a cure for AIDS or cancer could very well lie dormant within the subtly altered genes of those fish-apples (see opposing article).

Altered steaks: Frankenfood may not be the right answer



Joel Gaynor
THE CLACKAMAS PRINT

The advent of genetic engineering offered an exciting potential to increase and improve food sources, but its shoddy implementation and numerous health risks heavily outweigh the prospective upsides.

Genetic engineering is, by definition, an unnatural process. As detailed in an article by Dr. Ricarda Steinbrecher of the Women's Environmental Network, the process of genetic engineering is to remove segments of DNA from one species (such as a fish) and put them into a second species (such as a tomato) in an effort to alter the behavior of the second species. The aforementioned example of putting fish genes into the tomato is done to the freezing point of the engineered tomatoes to aid their ability to grow in cooler climates.

Unfortunately, fish genes aren't designed to work in tomatoes, and caterpillar genes weren't intended to be found in apple trees, and to remedy nature's uncooperative rules, scientists place a gene extracted from one species into a sort of viral composed virus into a different species. The result is an oft-unpredictable infection of the newly modified gene recipient. If all goes well, the desired effect occurs and the procedure is a success. Frequently, however, the new gene either doesn't work correctly, doesn't work at all, or will work for a period of

time and then inexplicably stop working. Assuming a gene is successfully ported from one organism to another, there are a plethora of other possible negative implications.

Consumption of genetically engineered products can strengthen the ability of a bacterium to resist antibiotic treatment. According to John E. Peck, executive director of Family Farm Defenders in Madison, Wisc., many dairies regularly inject their cows with Recombinant Bovine Growth Hormone (rBGH). Along with boosting milk production by 10 to 25 percent, cows recurrently injected are 50 percent more likely to suffer upper infections. Farmers then administer high levels of antibiotics that in turn are present in the cows' milk and fast-food hamburgers made from dairy cows. Many scientists have warned against this practice, as strains of bacteria that can survive the implemented antibiotics multiply and become harder to kill with conventional medicines.

In addition to the problems passed via their milk and beef, cows treated with rBGH experience shortened life spans and an increased rate of birth defects, per a report published by Americans for Safe Food.

Genetically engineered foods are also likely to contain nonnative allergens. Tests performed by scientists at the University of Nebraska at Lincoln found that soybeans—modified by genes from Brazil nuts for the purpose of providing certain nutrients the soybean naturally lacks—acquired proteins that could trigger potentially deadly allergic reactions in people who are allergic to Brazil nuts. Given the ability to transfer potentially fatal genes from food to food, and the average consumer's naivety concerning the ingredients of what he or she chooses to ingest, someone allergic to Brazil nuts but not soybeans could easily become seriously impaired as a consequence of simple midday munchies.

The fact is, as a science, genetic engineering has not evolved far enough to have its altered products available on the consumer market. Perhaps, if safer methods were developed and then thoroughly tested, there would be no reason to object to the practice. Until then, there is no reason not to.



PHOTO ILLUSTRATION BY JESSE LAMOND CLACKAMAS PRINT

Most modern road warriors show more dollars than sense



Jeff Sorensen
THE CLACKAMAS PRINT

People spend too much money trying to make their cheap cars look, feel, or sound faster than they are, but it's all a pointless and offensive waste of time.

So many of these cars have popped up as a result of bad racing movies that

they've become a nuisance for people who just want to enjoy the benefit of driving a small, fuel-conscious vehicle. This is why I've compiled a short list of traits to watch for when figuring out whether that small import deserves the respect of any considerate motorist or a dirty look and a noise complaint. After all, the things these cars go through should often be considered a crime.

The first offensive trait is a sound system that emphasizes the subwoofer(s) over any other speaker in the car. These are the fools who think louder is better. The problem is the sound frequencies produced by subwoofers are omnidirectional, or can be heard from all directions. Acoustically, this can create a phenomenon where the music from the jerk with the sub-

woofer reaches the ears of passersby on the sidewalk before the rest of the frequencies. This makes the music sound like it's coming from two really expensive stereos that had the play button pushed at separate times. In my professional opinion, these stereos simply sound like trash. Turn it down.

There are also a lot of people who will spend almost \$2000 for a set of nice, shiny rims that don't do anything at all. The only thing new rims do (other than look hideous) is make the speedometer lie and force the transmission to work harder than it should thanks to the extra weight and larger circumference of the tire. My solution: these drivers should take them

back and hire someone to re-teach them one of the high-school physics lessons they fell asleep in.

Finally there are the cars with the cheap "Autozone" mufflers that sound like my old 2-cycle chainsaw. These cars, like the sound system ones, are heard long before they are seen, and usually trick their owners into believing the "coffee can upgrade" makes their car faster. That's okay; I'm sure the extra horsepower and lower fuel economy will impress somebody.

I recently pulled up to one of these high school punks that wanted to race at a stop light. Maybe he wanted to race because my \$1,400 Hyundai came with a cheap spoiler, or maybe he was trying to impress his little girl-

friend. Sure enough, the light turned green and off he went.

According to Maddox, author of www.thebestpageintheuniverse.com, this guy proved one of four things:

A) His car is so fast and powerful that he can even beat people who aren't racing him.

B) He's a wise investor for buying those rims, because the ones he had just weren't cutting it.

C) Those stripes on his car look sharp and hide the fact that it's still just a Civic.

D) That he's a [dipstick].

Everyone else has had to put up with this for far too long, and someone needs to explain to these kids that it's time to grow up. No matter how loud or high a guy made his "ride" in high school, it's still a cheap car.

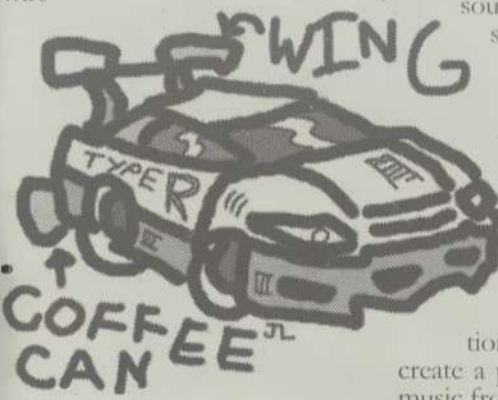


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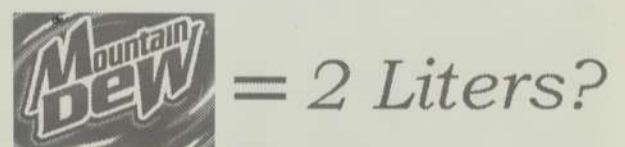
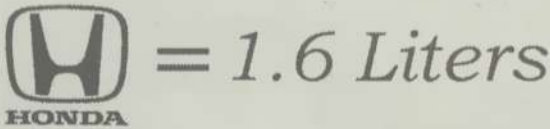


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