futures

Bordeaux Mixture

If at first you can't convince people about the benefits of GM crops — cheat.

Charles Dexter Ward

'm spraying my tomatoes with bordeaux mixture and it feels great. My wife says I do the tomatoes a disservice, dousing them with Bergerac, when our pension could easily spare Clydebank Cabernet. But the tomatoes love it. No sooner do I get to their row with the sprayer, than their desiccated leaves flush with green; their blooms perk up; their ripening fruits blush with a richer glow. They love me, my tomatoes, and I love them back. Today is special — it's 2090, and my tomatoes and I are celebrating the safe passage of our life-giving Sun through yet another total eclipse.

Anyway, while I'm up there schmoozing, I think how far we've come in just one lifetime. Once upon a time, tomatoes were monotonous plants that took a lot of looking after; constant watering and spraying against greenfly and rot. Today's GM tomatoes are as different from the crop of my youth as the einkorn and emmer they harvested in the Fertile Crescent with obsidian sickles.

I've got rows of them — tomatoes, that is — all the latest kinds: juicy blue ones as big as canteloupes; fluorescent orange fruits the size of pinheads but as hot as habañeros; long thin ones like cucumbers; tetrahedral ones; ones with edible roots; ones that grow like trees which I harvest like apples. And they look after themselves, pretty much; they farm their own mycorrhizae, nurse their own symbionts, kill off the weeds with endogenous antibiotics, and suck what little water they need out of the air. No, I only spray my tomatoes with bordeaux mixture because they enjoy it. They want me to, and, willingly, I oblige.

These days, the word 'tomato' seems almost redundant, as everything else in the garden has undergone much the same kind of transformation. If every plant can be made into anything you want, and made to taste like any other crop, it rather breaks down the barriers. If you have lettuces that look like onions and taste like lemon meringue pie, who cares about horizontal gene transfer?

You'd think that this uncertainty about what's what in the garden would worry me, given that I've always seen myself as something of a tomato connoisseur and never knew my onions. What if I found myself growing an aubergine by mistake, an aubergine that looks like a tomato? But the fact is I don't care: the tomatoes themselves see to that. It gives me such a thrill to see them practically whoop with solanaceous pleasure



as they see me advancing up the garden; such a feeling of contentment as I can hardly describe.

It hardly seems possible that, less than a century ago, people objected so violently to genetic modification, when subsequent history shows it to have been such a wonderful innovation. How silly it all now seems: all those people who trashed test crops seem, in retrospect, like those weavers who broke up power looms. But then, I was doing some of the modification, so perhaps I'm biased.

Now I'm long since retired, and the company I was working for back in 2007 - when everything changed — has gone the way of Microsoft and Tharsis Telomerase, I can tell all. In 2007, GM was so unpopular with the public that bioscience companies had to fund research and development almost in secret. Progress advanced in giant steps, but all behind the scenes. Unknown to the public, there were plants that did everything except talk back; plants that created their own self-sufficient ecospheres. A few were dropped on the martian South Pole. There were no announcements, no press releases. I hear that a few small stands of martian maize still thrive.

Then a few of us at the lab hit on an idea. We transfected maize with genes for human pheromones. With our corporate heads, we thought that this would do wonders for brand loyalty. The thing is, human pheromones influence behaviour subconsciously. To tell people what we were doing would defeat the object, wouldn't it? Late one night we planted a stand of GM maize in California (I forget exactly where) and within weeks there were activists pounding the door of the Capitol in Sacramento demanding GM crops. Success breeds success — we got the same encouraging results with courgettes in Chihuahua, tomatoes in Thailand and greengages in Glasgow.

But that was long ago, and anyway, when I'm up here with the tomatoes, all that matters is the continuous present, when I am surrounded by the rapturous cacophony of my gorgeous plants — all mine — the plants I love and that love me so much in return, filling the green ether with triumphant shouts of radiant joy.

Charles Dexter Ward hopes to be the first writer-inresidence on the Space Station. A collection of his fiction, God Among the Robots and Other Stories, will be published in 2000 by Unicorn Gardens Press.

NATURE VOL 404 23 MARCH 2000 www.nature.com

CE